

SALLA KIVELÄ

# **The Documentation of Family Violence in Healthcare and the Associations of Violence on Well-Being**



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The Documentation of  
Family Violence in  
Healthcare and  
the Associations of  
Violence on Well-Being

ACADEMIC DISSERTATION

To be presented, with the permission of  
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PunaMusta Oy – Yliopistopaino  
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To my mom,

For all the strength and determination you have passed on to me.



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Helsinki, December 15, 2019  
Salla Kivelä





# ABSTRACT

Family violence (FV) is a serious health problem worldwide, and Finland is one of Europe's most violent places for women. FV refers to violence within the family between any family members, usually taking place in the home. In healthcare, the documentation of injuries is critically important, using the international classification of diseases (ICD) codes. Besides the required hospital care, FV has serious effects on the health and well-being of the whole family. The purpose of this study is to form a synthesis of the documentation of FV in healthcare and the associations of FV on individual well-being. The documentation and especially the use of the ICD codes in the FV patients' care have not been described to this extent in previous research conducted in Finland. In addition, little is known about the family functioning and health of FV perpetrators or victims and the social support they receive in healthcare settings. Hence, it is essential to learn more about these issues and their evolution.

In total, the sample consisted of 1561 participants. The documentation and care of the hospitalised FV patients' data (N = 1302) were collected twice from one Finnish central hospital database, using specific ICD-10 diagnostic codes, during the 10-year period from 1 January 2008 to 31 December 2017. The associations between FV and family functioning, health, and social support data (N = 259) were collected by using the Family Functioning, Health and Social Support (FAFHES) questionnaires from patients who visited a Finnish central hospital between October 2012 and April 2013, and follow-up surveys were collected from March 2015 to September 2015.

The analysis of the data, were performed using both qualitative and quantitative methods to obtain rich data. The analysis of the register based data was performed using content analysis, and the FAFHES questionnaires were analysed with statistical analyses (unadjusted analyses and linear regression model) using the IBM SPSS programme. As a result, 206 (13%) victims or perpetrators of FV were found. The risk of violence increased with the variables of female gender, young age, alcohol, and night-time. Various acts of violence were used, causing multiple injuries. The prevalence and roles of violence varied and changed during time. Family functioning was poor among the victims and participants whose violence had continued. Family

health varied and seemed to be slightly poorer among women. Social support was found to be worse for the victims and participants who continued to experience or use violence. The documentation and coding was insufficient because only 34 (3%) visits were coded with a proper perpetrator code. The amount of perpetrator codes decreased, even though the general number of assault and physical violence coded visits increased.

To conclude, FV is a complex phenomenon, and various patients can have an FV background in different healthcare settings. The findings suggest a great need to improve documentation and coding in healthcare as an important part of good care. The study points to the importance of ensuring the overall well-being of FV patients or perpetrators, and their families. Healthcare professionals need the knowledge and skills to identify and intervene in FV. The findings should encourage healthcare, legal, and social service professionals to better identify and focus more broadly on the overall physical and mental well-being of the FV patients and their families. Thus, the well-being of individuals, families, and society can be improved.

**Key words:** family violence, documentation, ICD-10, family functioning, family health, social support, care development

# TIIVISTELMÄ

Perheväkivalta on maailmanlaajuinen terveysongelma ja Suomi on yksi Euroopan väkivaltaisimmista maista naisille. Perheväkivalta on usein kotona tapahtuvaa perheen sisäistä väkivaltaa, jossa väkivalta kohdistuu perheen jäseneen. Perheväkivalta aiheuttaa inhimillisiä kärsimyksiä koko perheelle sekä kuormittaa terveydenhoitoa. Terveystieteiden tutkimuksessa potilaalle aiheutuneiden vammojen kirjaaminen on keskeistä kansainvälisen ICD-10 tautiluokituksen avulla. Tutkimuksen tarkoituksena oli muodostaa synteesi perheväkivallan kirjaamisesta terveydenhuollossa ja väkivallan yhteydestä yksilön hyvinvointiin. Väkivallan kirjaamista ja erityisesti ICD-10 tautiluokituksen sisältämien diagnoosikoodien käyttöä perheväkivaltapotilaiden hoidossa ei Suomessa ole kuvattu näin laajasti aiemmin. Lisäksi perheväkivaltaa kokeneiden tai tekijöiden perheiden toimivuudesta, terveydestä ja heidän saamastaan tuesta terveydenhuollossa on vain vähän tietoa.

Tutkimusaineisto sisälsi yhteensä 1561 osallistujaa. Kirjaamisen ja sairaalahoitoon joutuneiden potilaiden aineisto (N = 1302) kerättiin kahdessa eri vaiheessa erään suomalaisen keskussairaalan sähköisestä potilasrekisteristä valittujen ICD-10 diagnoosikoodien avulla ajalta 1.1.2008-31.12.2017. Toinen aineisto kerättiin perheväkivallan yhteydestä perheen toimivuuteen, terveyteen ja saatuun tukeen FAFHES-lomakkeen (Family Functioning, Health and Social Support) avulla. Ensimmäinen FAFHES-kysely kerättiin eräässä keskussairaalassa asioineilta potilailta 10/2012-03/2013 ja jatkokysely kerättiin ensimmäisen kyselyn vastaajilta 03/2015-09/2015.

Monipuolisen tutkimusaineiston saamiseksi aineiston analysointi toteutettiin sekä laadullisen, että tilastollisen menetelmän avulla. Potilasrekisterin potilasasiakirjat analysoitiin laadullisesti sisällön analyysillä ja FAFHES-lomakkeet tilastollisesti SPSS ohjelmalla. Aineistosta löytyi yhteensä 206 (13%) perheväkivallan uhria tai tekijää. Suurimmassa osassa aineiston tapauksista uhrina oli nuori nainen, tapahtuma-aikana yö ja väkivaltaan liittyi alkoholi. Uhreihin kohdistettiin erilaisia väkivallan tekotapoja, jotka aiheuttivat useita eri vammoja. Väkivallan yleisyys ja roolit (uhri tai tekijä) perheessä vaihtelivat tutkimuksen aikana. Perheen toimivuus oli heikkoa väkivallan kokijoilla sekä osallistujilla, joiden perheissä väkivalta oli jatkunut. Perheiden terveys oli vaihtelevaa ja naisilla hieman heikompaa kuin miehillä. Terveystieteiden tutkimuksen tuki oli

heikompaa sekä väkivallan kokijoilla ja osallistujilla, joiden väkivalta jatkui. Väkivallan kirjaaminen ja dokumentointi osoittautui puutteelliseksi, koska ainoastaan 34 (3%) käynneistä oli kirjattu oikean lisäkoodin avulla. Lisäkoodien määrä oli vähentynyt, vaikka merkittyjen Murha, tappo tai muu tahallinen pahoinpitely -käynnit olivat lisääntyneet.

Perheväkivalta on kliininen ja emotionaalinen haaste kaikille terveydenhuollon ammattilaisille, jotka työssään tapaavat, tutkivat ja hoitavat perheväkivallan uhreja. Väkivallan kirjaaminen osoittautui puutteelliseksi, joten siihen tulisi panostaa enemmän osana potilaan hyvää hoitoa. Lisäksi perheväkivallan uhrien ja tekijöiden, sekä heidän perheidensä kokonaisvaltaiseen hyvinvointiin tulisi kiinnittää huomiota. Terveydenhuollon ammattilaiset tarvitsevat lisää tietoa ja osaamista väkivallan tunnistamiseen ja siihen puuttumiseen. Tulosten avulla voidaan kehittää terveyden- ja sosiaalihuollon sekä oikeudellisten palveluiden ammattilaisten osaamista tunnistamaan paremmin mahdollinen perheväkivalta sekä huomioimaan laajemmin väkivallan uhrien tai tekijöiden ja heidän perheidensä fyysinen ja henkinen hyvinvointi. Näin yksilöiden, perheiden ja yhteiskunnan hyvinvointia voidaan lisätä.

**Avainsanat:** perheväkivalta, kirjaaminen, ICD-10, perheen toimivuus, perheen terveys, perheen saama tuki, hoidon kehittäminen

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# ABBREVIATIONS

ETENE	The National Advisory Board on Social Welfare and Health Care Ethics
FAFHES	Family Functioning, Health, and Social Support questionnaire
FRA	European Union Agency for Fundamental Rights
FV	Family violence
HFN	Head, face, and neck area
IPV	Intimate partner violence
OSF	Official Statistics of Finland
PTDS	Post-Traumatic Stress Disorder
STM	The Ministry of Social Affairs and Health
Tays	Tampere University Hospital
TENK	Finnish National Board on Research Integrity
THL	National Institute for Health and Welfare
WHO	World Health Organisation

# ORIGINAL PUBLICATIONS

This thesis is based on the following original publications, which are referred to in the text by their Roman numerals:

- I Kivelä, S., Leppäkoski, T., Kälvinmäki, J., Ruohoniemi, J., Puolijoki, H., & Paavilainen, E. (2016). Miten parisuhdeväkivalta näyttäytyy terveydenhuollossa [How intimate partner violence appears in healthcare] *Journal of Social Medicine*, 53, 98–107.
- II Kivelä, S., Leppäkoski, T., Ruohoniemi, J., Puolijoki, H., & Paavilainen, E. The Documentation and Characteristics of Hospitalised IPV Patients Using Electronic Medical Records data: a Follow-up Descriptive Study. *Journal of Family Violence*, 34(7), 611-619. doi: 10.1007/s10896-019-00081-z
- III Kivelä, S., Leppäkoski, T., Helminen, M., & Paavilainen, E. (2018). A cross-sectional descriptive study of the family functioning, health and social support of hospital patients with family violence backgrounds. *Scandinavian Journal of Caring Sciences*, 32(3), 1083–1092. doi: 10.1111/scs.12554
- IV Kivelä, S., Leppäkoski, T., Helminen, M., & Paavilainen, E. (2019). Continuation of domestic violence and changes in the assessment of family functioning, health, and social support in Finland. *Health Care for Women International*, 40(11), 1283-1297. doi: 10.1080/07399332.2019.1615917

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# 1 INTRODUCTION

Family violence (FV) is a violation of human rights that occurs at every level of society and influences the whole family (Krug et al., 2002; WHO, 2010). FV is a global health concern with serious negative consequences for the health and well-being of victims, perpetrators, families, and society at large, resulting in significant social and public health costs (García-Moreno et al., 2005; WHO, 2013). Violence at home or in the family can cause harm that lasts a lifetime and spans generations (WHO, 2010). Globally, almost one-third (30%) of women and men (29%) who have been in a relationship have experienced violence in their relationship (Reid et al., 2008; WHO, 2013).

Finland is one of Europe's most violent places for women and most cases of FV remain unknown to authorities. A study conducted by the EU's Fundamental Rights Agency (FRA) found that Finland was the EU's second-most violent country for women. Almost half (47%) of Finnish women have experienced physical or sexual violence since the age of 15, compared to a European-wide average of 33%. Every fourth woman (27%) had suffered physical abuse from a partner in the family. Women experience more mild violence or threats than men in their relationships. (FRA, 2014.) Only 10–13% of FV cases were reported to police (Danielsson & Näsi, 2018). A report published by the National Institute for Health and Welfare (THL) suggested that more people in Finland are experiencing FV than ever before, or at least more people reached out to a state helpline or shelter for support. During the year 2017, 130 000 people were victims of violence that had occurred within intimate relationships. (THL, 2018.)

According to Official Statistics of Finland (OSF) data, altogether, of victims of FV, 68.1% were women and 77.8% of suspects were men in 2017. The proportion of women perpetrators had increased from 19.6% (2010) to 22.2% (2017). One-fifth of violence took place between former married or cohabiting couples, a number which has been growing slightly in recent years. FV directed by parents against their underage children decreased by 2.2% compared with the previous year. However, acts against boys increased by 5%. The victim was a boy more often than a girl among victims under age 15. Around one-third of violence directed by parents against their

children was carried out by women. The younger the child victim was, the higher the share of perpetrators were women. (OSF, 2017.)

Violence is related to a variety of serious consequences, including short- and long-term physical, sexual, reproductive, and mental health problems, as well as consequences for the social well-being of individuals and their families (García-Moreno et al., 2005; Hellemans et al., 2015; Paranjape et al., 2009; WHO, 2010). Violence sometimes even leads to the death of the victim. Women assaulted by an intimate partner are at a greater risk of injury, as they have more frequent moderate to severe injuries than other women (Zilkens et al., 2017). Women are also at a greater risk for FV homicide–suicide victimisation than men, and represent an important population for intervention efforts (Sabri et al., 2015). Moreover, as many as 38% of all murders of women are committed by intimate partners (WHO, 2013). In Finland, a total of 60% of female homicide victims and 8% of male victims were murdered by intimate or former intimate partners (Lehti, 2018).

Children and adolescents are also affected by violence in the family. In a study performed by Chapin and Coleman (2014), nearly one-third (28%) of adolescents had experienced some form of physical assault in the home. Exposure to parental violence is associated with diminished health, dissatisfaction with life, and school bullying (Norman et al., 2012). Violence can damage the mental health of children and adolescents in multiple ways, such as by causing depressive and anxiety-related problems, hyperactivity, post-traumatic stress disorder (PTSD) symptoms, and delinquent behaviour (Grip et al., 2014; Levendosky et al., 2013; Peltonen, 2011).

Patterns of FV are known to be intergenerational between childhood and later life (Bradbury-Jones et al., 2017). For children and adolescents, witnessing violence increases the risk of health and well-being problems more than experiencing the actual physical violence. Parents' relationship with each other is an essential model for their children's relationships and social interactions. Early childhood and adolescent abuse are predictors in the development of FV perpetration and victimisation in adulthood. (Costa et al., 2015; Ellonen et al., 2013; Ruddie et al., 2017.) According to Widom et al. (2014), child maltreatment increases the risk for the most serious form of FV involving physical injury. Adults with documented histories of child maltreatment face an increased risk of a greater number and variety of acts of physical and psychological violence from an intimate partner (Widom et al., 2014).

FV during pregnancy strongly predicts violence after pregnancy. Almost one in five (19.8%) mothers and fathers experienced either physical violence or emotional abuse during pregnancy (Pajarita & Perreira, 2007). Violence in the family is a

significant risk factor for unwanted pregnancy, abortion and pregnancy-related complications, miscarriage, pregnancy trauma, placental abruption, and premature labour. Moreover, violence affects the health of an infant in the form of low birth weight, less than excellent general health, and difficult temperament. (Burke et al., 2008; Leone et al., 2010; Meiksin et al., 2015.)

FV is a significant but often unidentified problem in healthcare. Various patients can have a FV background, and victims and perpetrators of FV visit hospitals regularly. Both men and women experience violence, but only a limited number seek help from healthcare professionals. Previous studies have shown that victims and perpetrators with violent experiences have more hospital visits, several diagnoses, mismatches between hospital reports, and a higher rate of readmission than patients who have not experienced violence (Chan et al., 2013; Kothari & Rhodes, 2006; Matteoli et al., 2016; Notko et al., 2011). Patients' denial of violence, the phenomenon of violence being a sensitive issue, the inconsistency between patients' stories and physical examinations, and a lack of time and resources are the main barriers to identifying violence (Bradbury-Jones et al., 2014; Leppäkoski et al., 2014; McCauley et al., 2017).

According to Leppäkoski et al. (2014), approximately one-third of healthcare professionals had, on at least one occasion, met or treated a patient who had experienced violence. Healthcare professionals play a vital role in both identifying and providing FV victims with the necessary treatment, support, and care (García-Moreno et al., 2005). As observers, healthcare professionals are often able to identify the unique needs of their patients (Modi et al., 2014). Health services must be places where patients feel safe, are treated with respect without stigmatisation, and can receive quality and informed support (García-Moreno et al., 2005; McCauley et al., 2017). Male victims in particular may be reluctant to report violence for fear of being rejected, humiliated, and ridiculed by healthcare professionals (Barber, 2008; Kumar, 2012).

This study applies the concepts and methods of nursing sciences in the context of family violence. The study is focused on families, and the health and care of families. The study was conducted as part of the family violence research group in Tampere University, Health Sciences. This team is concerned with the experiences of family violence and child maltreatment, as well as preventing and identification interventions and practices and their effectiveness.

## 2 STARTING POINTS OF STUDY

The review of the literature presented in this chapter aims to provide a framework for this study. Several literature searches were conducted during the research process, and the focus has been refined through the process. The starting points of the study were based on the results of literature searches conducted between 2014 and 2019. As FV occurs at every level of society and influences the whole family and healthcare, the important concepts in the study are family violence, documentation, family functioning, family health, and social support. The term “family violence” was chosen as the primary term for violence in the family because the term largely consists of violence between different family members.

The publications for the study were searched for in several databases: Andor, MEDLINE (Pubmed), CINAHL, PsycINFO, and Medic. The search criteria were articles available in the English or Finnish (Medic) language with abstract and full text accessibility and peer-reviewed status. The search terms utilised are described in Table 1. The terms were used both individually and in various combinations.

**Table 1.** Search Terms Utilised in the Literature Review

Terms for Family Violence	Terms for Documentation and Healthcare	Terms for Family Well-Being
Family violence	Healthcare	FAFHES (Family Functioning, Health and Social Support questionnaire)
Domestic violence	Documentation	Family
Interpersonal violence	ICD-10	Family functioning
Battering	Coding	Family health
Spousal abuse	Hospital care	Social support
Partner violence	Care development	Support for parties of violence
Child abuse	Family nursing	Quality of life
Child neglect		
Perpetrator		
Victim		

Additionally, a manual search was performed for some primary studies and older research literature was included in some cases. Furthermore, some basic literature and sources from the World Health Organization (WHO) and the National Institute



for Health and Welfare (THL) were used. Based on the search results, first the titles of articles were reviewed to identify relevant sources. Next, the abstracts of the selected articles were assessed and finally, articles were selected based on their full-text relevancy.

Overall, the literature review included several literature searches during the research process revealing multiple publications. The publications were search separately for each article (I-IV), and the final search was conducted for the synthesis. The literature review will focus on family violence, victim, perpetrator, documentation, and ICD-10 coding. In addition, the conceptual dimensions of family function, family health, and social support are also described.

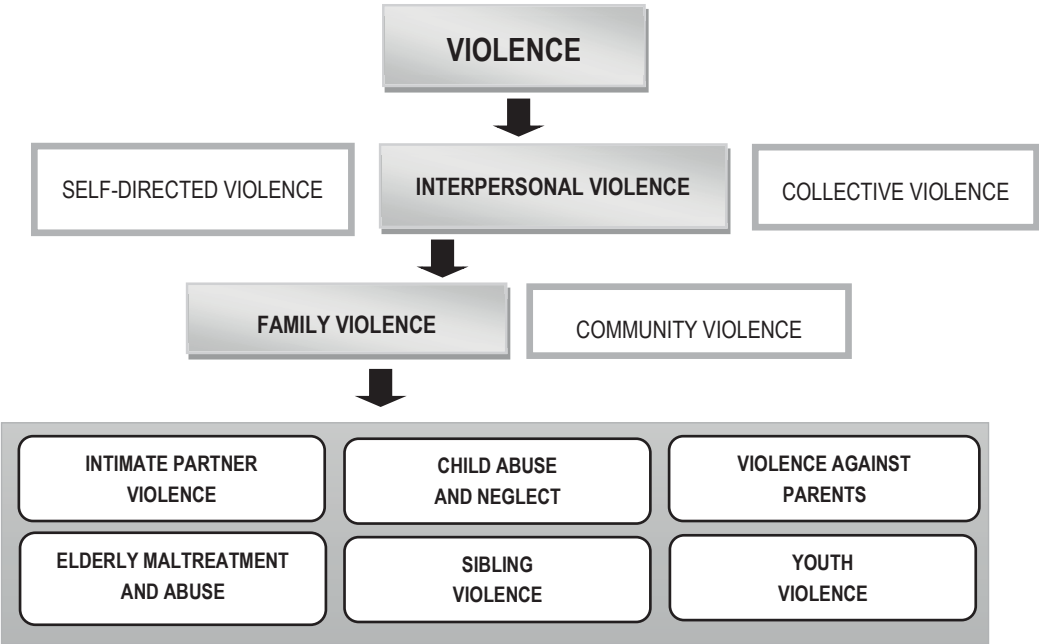
Some research evidence exists regarding the outcomes of violence, as well as healthcare professionals' important position in helping patients who have experiences of violence. However, little is known about the content of the documentation of FV in healthcare. The documentation and especially the use of the ICD codes in the FV patients' care have not been described to this extent in previous research conducted in Finland. In addition, many questions remain regarding the functioning and health of FV perpetrators or victims and the social support they receive in healthcare settings. Hence, it is essential to learn more about these issues and their evolution.

Overall, the research provides further evidence of the overriding importance of good FV patient care; the importance of the documentation and proper ICD coding as well as, ensuring the overall well-being of FV patients or perpetrators, and their families.

## 2.1 Family violence

Violence is a complex phenomenon, and there are many possible ways to define violence, depending on who is defining it and for what purpose. According to WHO (1996), violence is 'the intentional use of physical force or power, threatened or actual, against oneself, or against a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation'. The typology of violence and the different forms of FV are presented in Figure 1. As a concept, the typology divides violence into three different categories: self-directed violence, interpersonal violence, and collective violence. FV is part of interpersonal violence. FV means violence inside the family, within close

relationships between any family members, usually taking place in the home. (Krug et al., 2002.)



**Figure 1.** Modified by King typology of violence and the different forms of family violence (Krug et al., 2002)

FV involves a pattern of abusive behaviour over time, and violence occurs in all demographic groups (Cao et al., 2014). Besides physical aggression, such as hitting or kicking, FV includes emotional abuse, controlling behaviour, forced intercourse, and other forms of sexual coercion. In addition, child and elderly abuse includes neglect by parents or other caregivers, and elderly people are especially vulnerable to economic abuse (Krug et al., 2002.) Both men and women experience FV, and it also occurs between partners of the same sex (Flinck, 2006; Keiski, 2018; Krug et al., 2002).

One of the most common forms of FV is intimate partner violence (IPV). IPV includes physical violence, sexual violence, and emotional and controlling behaviours by a partner. “Partner” refers to a current or former spouse (married spouse,

common-law spouse, civil union spouse, domestic partner), boyfriend or girlfriend, dating partner, or sexual partner (Breiding et al., 2015). The focus of FV in this thesis is on IPV experienced by patients aged 18 years and older.

## 2.2 Victim

According to previous studies, multiple factors can lead to victimization or to perpetration of FV. Individuals involved in FV are frequently both victims and perpetrators. Especially, most of those initially victimized also become perpetrators. (Caetano et al., 2008.) Poor economic circumstances, low education, poor relationships with parents, and being raised by a single parent are all significant risk factors for becoming a victim or a perpetrator of FV (Costa et al., 2015; Mavrikiou et al., 2014; Ralo et al., 2016; Thornberry et al., 2014).

Many adult victims of FV are young, unmarried females, and the relationship durations is most often less than 12 months (Campbell et al., 2017). Violence in family is assumed to be associated with adults. However, children are present in the majority of incidents. (Hester, 2013.) Victims experience several forms of violence (physical, emotional, sexual or economic), which affects significantly on victims' health and well-being. Female victims, who experience severe combined physical, emotional, and sexual violence have poorer quality of life and mental health than women experiencing other abuse types (Hegarty et al., 2013). Posttraumatic stress disorder (PTSD) is also connected with FV victims. Especially, childhood exposure to violence, violence severity, and feeling helpless are all associated with high PTSD levels. (Dekel et al., 2019.)

The most common forms of violence among male victims are emotional, followed by physical and sexual violence (Machado et al., 2018). Types of emotional violence include bullying, ignoring, threatening and blackmailing. In addition, children are often used as means of power. Hence, male victims feel powerless out of fear of losing contact. (Drijber et al., 2013.) FV against men, is typically initiated by the female partner and has a negative and diffuse impact on the victim's life (Machado et al., 2018). For male victims, emotional violence may result in psychological trauma, including anxiety, chronic depression, or PTSD (Drijber et al., 2013).

## 2.3 Perpetrator

As shown in the previous studies, besides the common risk factors for becoming a victim or a perpetrator (education, economic circumstances, relationship with parents), other associated factors with perpetration are young age and male gender (Cao et al., 2014). Alcohol and/or drugs are especially used by the perpetrator, but also by the victim (Drijber et al., 2013). In addition, those who have witnessed interparental violence (either alone, or in combination with experiencing violence), are most likely to be classified as perpetrators. Especially, men who have both witnessed interparental violence, and experienced physical violence in childhood are more likely to become perpetrators. (Fowler et al., 2016.)

While the content of FV varies, similarities and differences in violence used by men and women relating to the nature, and forms of violence exist. Men are the perpetrators in a much greater number of FV incidents, and the violence used against female partners is much more severe than that used by women against men. (Caetano et al., 2008; Hester, 2013.) Personality factors, such as impulsivity, are associated with perpetration of violence among men. However, powerlessness, have a wider and more varied effect among women for it increases the likelihood of perpetration. (Caetano et al., 2008.)

Women are also perpetrators of FV, and can commit severe acts of violence (McKeown, 2014). According to Caman et al. (2017), there has been a modest decline in male-perpetrated FV, but the low rates of female-perpetrated FV has remained stable. Female perpetrators use mainly repetitive emotional violence, and in physical violence, women are more likely to use an object in their forms of attack. The used objects, include household items such as chairs, knives, vases and tableware. (Drijber et al., 2013; Machado et al., 2018.) The majority of female-perpetrated FV involve alcohol before or during the violence (Caman et al., 2017). Although, female perpetrators are more likely to be alcoholic, or mentally ill, alcohol misuse by men has a greater impact on severity on outcomes of violence (Hester, 2013).

## 2.4 Documentation and ICD Coding

The prevention, development, implementation, and evaluation of healthcare rely on good quality and consistent documentation (WHO, 2018). The documentation of injuries from FV is critically important, especially when a victim seeks legal help

(Deutsch et al., 2017). According to the National Institute for Health and Welfare (THL) guideline, when examining a victim of assault or other violence, physicians should always document and describe all injuries found with care. Injuries should be documented in photographs or drawings when possible. In addition, prerequisites should be documented and described as presented. The prerequisites have special significance, especially in evaluating the correspondence of the anamnesis and the findings. The source of the prerequisites has to be mentioned (THL, 2016.)

Organisations should provide education and training for staff on available forms and best practices for effective and efficient documentation (Penoyer et al., 2014). Healthcare professionals should regularly review their practice of screening for partner abuse and the quality of assessment and documentation (Ritchie et al., 2013).

The International Classification of Diseases (ICD) is one of the oldest and most important classifications in healthcare. Originally, ICD was used to classify the causes of mortality as recorded at the registration of death. However, its scope was extended to also include diagnoses in morbidity. Currently, the ICD can be used to classify diseases and other health problems. (WHO, 2011.) The classification is used as a coding system in medical databases, where any injury or disease is coded. Routinely collected hospitalisation data are used for statistical purposes to monitor injury trends and provide estimates of the burden of injury and healthcare costs, as well as to inform policy. The ICD codes can have enormous financial importance since they are used to determine how best to invest resources. (WHO, 2018.)

The World Health Organization (WHO) maintains the ICD coding. The codes are used by many countries for mortality and morbidity statistics so that comparable data can be shared and tracked worldwide to improve health outcomes for all. However, ICD data also plays a central role in research, healthcare policy, and health finance (Rinkie & Boerner, 2013). The codes translate diagnoses of diseases and other health problems from words into an alphanumeric code, which permits easy storage, retrieval, and analysis of the data. As the international standard diagnostic classification, the ICD coding includes the analysis of the general health situation of population groups and the monitoring of the incidence and prevalence of diseases and other health problems in relation to other variables, such as the characteristics and circumstances of the individuals affected. (WHO, 2011.) All of the benefits of coding cannot be achieved without capturing the specific codes, which depends on the supporting documentation and the physicians' awareness and training to document and select the specific codes (Rinkie & Boerner, 2013).

ICD-10 is the 10th revision of the ICD coding, which was published in 1992. As ICD-10 is a vital component of national data sets, Finland adopted ICD-10 as the

official classification system in 1996. (THL, 2011.) WHO manages and publishes the base version and gives specific instruction on the use of ICD-10 classification in some areas, whilst it provides options and guidance of a general nature in other areas. The national versions may differ from the base classification in the level of detail, the adoption of a category, or the addition of procedure codes. Internationally, several member states have made some modifications to better accommodate its utility. (Health and Social Care Information Centre, 2017.) The Finnish ICD-10 version is largely in line with WHO classification (THL, 2011).

## 2.5 Family functioning, family health, and social support

Family attitudes, habits, and customs have an impact on how people look after their health and the role of family is central to their well-being. The ways in which families are organized to respond to external and internal stressors plays a substantial role in determining whether violence will occur. Violent families are more likely to exhibit signs of economic stressors such as high rates of unemployment, smaller living quarters, and dissatisfaction with family income and household size. (Cao et al., 2014.)

Family functioning includes the degree to which one has a successful everyday life and the interaction between family members (Leppäkoski & Paavilainen, 2015; Paavilainen et al., 2006). The family structure, organisation, resources, stability, and relationships between family members have a significant effect on family members' levels of stress, their management of conflicts, and the frequency of their violent interactions (Kang, 2012). Authoritarian power structures are more common among violent households compared with nonviolent households, while democratic family structures appear to offer some protection against FV risk (Cao et al., 2014). Low socioeconomic status and parents' education levels increase the likelihood of FV (Koçtürka & Yükselb, 2019). In addition, problematic family structure (divorce or death of a parent), dysfunctional parental partner dynamics, and poor parent–child communication are also linked to FV (Koçtürka & Yükselb, 2019; Tucker et al., 2014).

Health consists of actions and activities that promote the family's well-being (Leppäkoski & Paavilainen, 2015; Paavilainen et al., 2006). FV is linked to poor physical and mental health (Paranjape et al., 2009). In addition, previous studies have clearly shown the interrelationship between being a victim of violence and experiencing poor health (Sillito, 2012; Krug et al., 2002).

Social support includes the help and emotional support that is given by professionals in healthcare settings (Leppäkoski & Paavilainen, 2015; Paavilainen et al., 2006). Health services play an important role in providing victims with necessary treatment and care. Therefore, health services must provide a place where patients can feel safe and receive quality, informed support (García-Moreno et al., 2005). The care of patients requires multidisciplinary collaboration and professionals who have the required knowledge, skills, and commitment for identifying and intervening in cases of FV (Leppäkoski et al., 2015; Leppäkoski & Paavilainen, 2013). The focus is 'social support' only in relation to health care

In the end, the term well-being was chosen as the general term for family functioning, family health and social support to be used in the title and text to describe and contain the three terms in short.

## 2.6 Summary of the literature review

In healthcare, the identification and documentation of FV is still difficult and varies, which underestimates the incidence of violence (Nittis et al., 2013). Healthcare professionals often have stereotypical beliefs about patients who experience FV (Koistinen & Holma, 2015). In addition, screening for FV varies, and very few emergency departments have routines to identify victims. There seems to be a lack of general preparedness, which can mean that many patients do not receive appropriate care and treatment (Linnarsson et al., 2013). The documentation of injuries, evidence collection, and reports are not always consistently high quality. Assessment by healthcare professionals in forensic documentation and interpretation of injuries can result in a number of benefits for the victims and positive court outcomes, including an increase in the rate of successful prosecutions (Nittis et al., 2013).

Healthcare professionals need the knowledge and skills for identifying and intervening in FV, which require a commitment and multidisciplinary collaboration (Leppäkoski et al., 2015). To develop appropriate care, it is crucial that further training is provided to healthcare professionals to enable them to identify violence and to learn how to enquire about it (Kanervio et al., 2017; Leppäkoski et al., 2010). Training improves healthcare professionals' confidence, practice, and skills in the identification and response to FV (Ambuel et al., 2013; Boursnell & Prosser, 2010). With training and intervention, new policies and procedures, increased FV screening, and increased documentation can be implemented (Ambuel et al., 2013). As our

societies become more international and FV is a pervasive problem, coordinated services and training for healthcare, legal, and social service professionals are necessary (Ting, 2010).

To conclude, FV is a complex phenomenon including different types of violence in close relationships. The victims' and perpetrators' family experiences are significant since violence affects the well-being of a whole family. By providing good documentation in healthcare, any injury can be coded to monitor FV trends, burdens, and costs. Overall, there is a great need to identify the victims of FV and document their care, as well as to develop care policies, especially considering that the role of the family is central to the health and well-being of individuals. FV has associations on the health and well-being of the family and that is an area that healthcare professionals should pay attention to. To understand the complex factors associated with FV and to enable the development of identification and intervention policies, it is essential to know more about these issues and their evolution.

The study increases healthcare professionals knowledge about the diverse and complex factors associated with FV on different levels. The knowledge improves healthcare professionals' confidence, practice, and skills in the identification and response to FV patients and their families. The study findings should encourage healthcare professionals to better identify and intervene in violence.



### 3 PURPOSE AND AIMS OF STUDY

The purpose of the study is to form a synthesis of the documentation of FV in healthcare and the associations of violence on the individual well-being. As a result, the study increases the significance and awareness of the documentation as an important part of good care, as well as increasing knowledge of the associations of violence on family functioning, family health and social support.

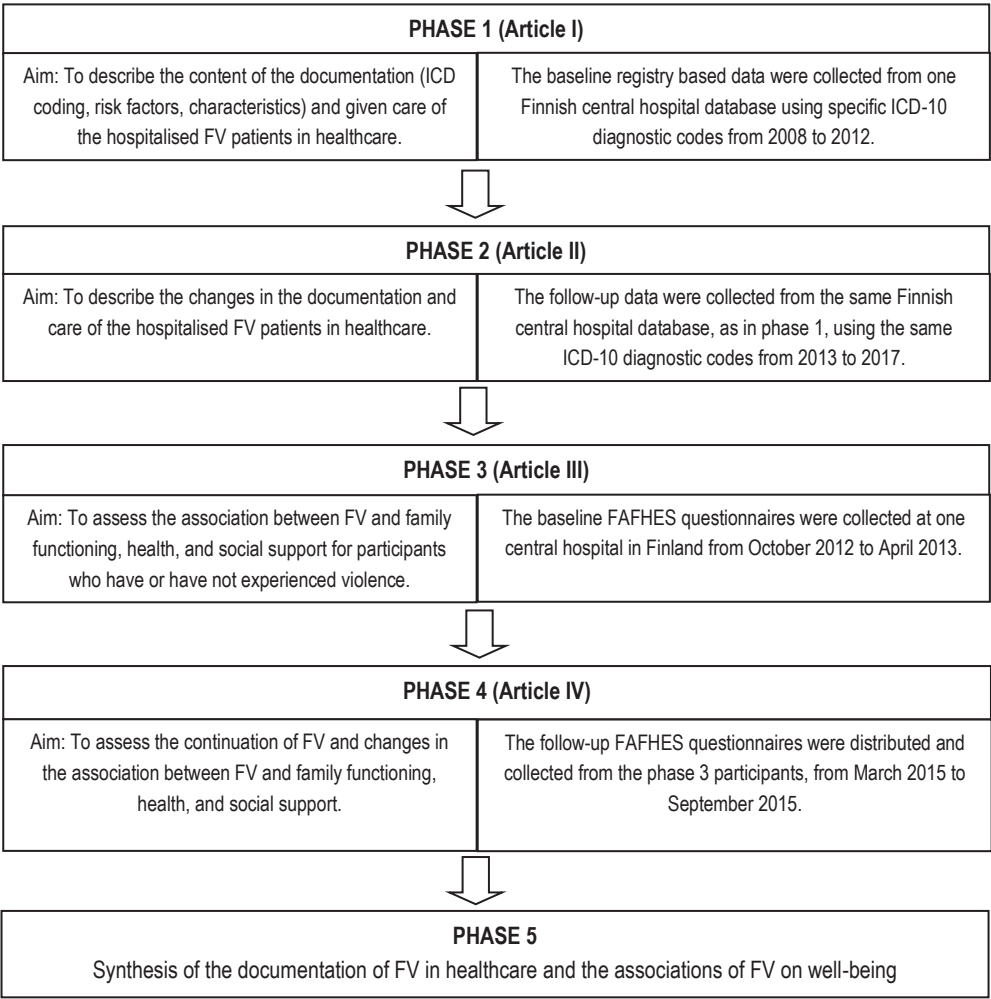
The specific research questions of the study are as follows:

1. What kinds of risk factors and characteristics (gender, age, event time, act of violence, wounds and injuries) are related to FV patients in healthcare? (Articles I–II)
2. What kind of association does FV have on family functioning, family health, and social support? (Articles III–IV)
3. What is the content of the documentation and care of hospitalised FV patients? (Articles I–II)
4. What kind of association does FV might have to society based on the healthcare documentation? (Articles I–II)

# 4 METHODOLOGY AND METHODS

## 4.1 Survey design

The survey design using registry based data and questionnaires included five different phases, as presented in Figure 2.



**Figure 2.** Survey design

Phases one to four (articles I–IV) contained two different baseline studies and two follow-up studies. Phase one (article I) and two (article II) were conducted to describe the content of the documentation and care of the hospitalised FV patients in healthcare during the 10-year period extending from 1 January 2008 to 31 December 2017. The baseline registry based data (article I) were collected from one Finnish central hospital database using specific ICD-10 diagnostic codes from 2008 to 2012. In phase 2 (article II), the follow-up registry based data was collected from the same hospital from 2013 to 2017 using the same codes. FV-related visits were defined from the hospital database with specific ICD-10 codes, and using free-text searching from the electronic medical records.

Phase three (article III) and four (article IV) investigated the association between FV and family functioning, health, and social support using the Family Functioning, Health and Social Support (FAFHES) questionnaires. The baseline questionnaires (article III) were distributed and collected at one central hospital in Finland from October 2012 to April 2013. The follow-up questionnaires (article IV) were sent via post and collected from March 2015 to September 2015. After the four phases were completed, the final phase five aimed to formulate the synthesis, based on all of the data (articles I–IV).

## 4.2 Methodological basis

In this study, the analysis of the data, were performed using both qualitative and quantitative methods, which were combined as mixed-method research to obtain new data on the complex phenomenon of FV. Mixed methods were also used to integrate different perspectives on FV and to construct as comprehensive an understanding of the phenomenon as possible. Moreover, mixed methods increased the reliability of the study by expanding the scope and improving the analytic power of the study. In addition, both qualitative and quantitative methods connect the findings to nursing theoretical frameworks, thus expanding nursing knowledge development (Bunkers, 2012; Kylmä & Juvakka, 2007: 17; Leppäkoski & Paavilainen, 2012; Sandelowski, 2000.) Findings from mixed-methods studies' are very useful for healthcare professionals providing a more in-depth exploration of healthcare phenomenon. Moreover, the combination of both methods provides rich data regarding the qualitative enquiry (Bressan et al., 2016).

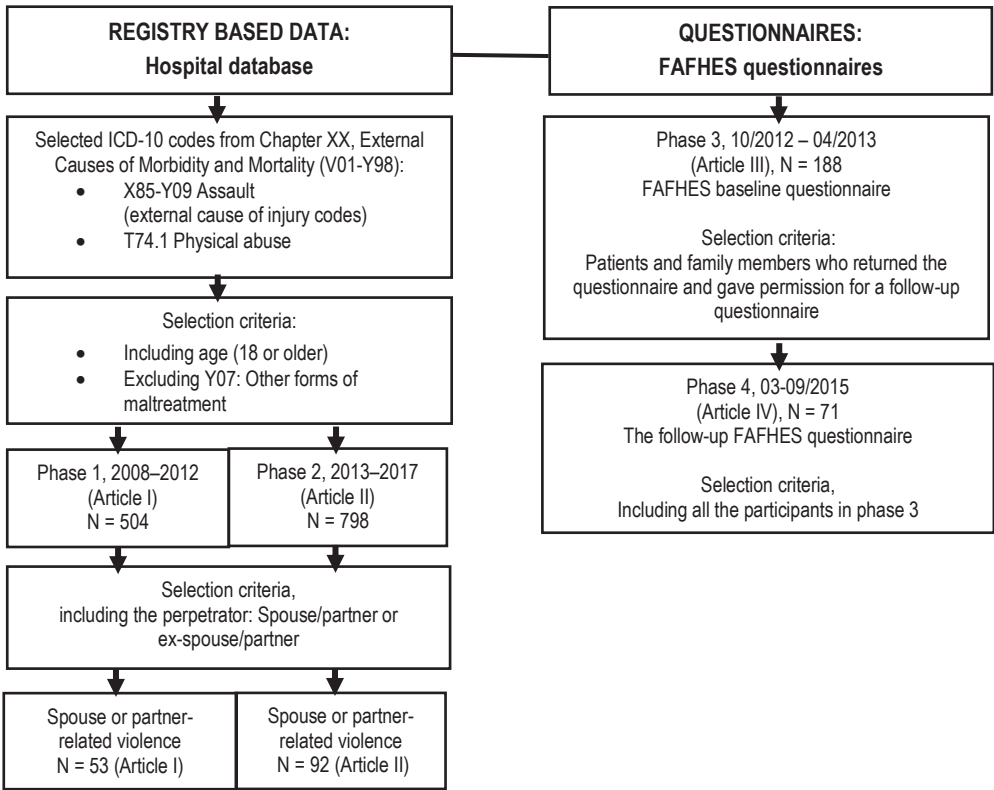
The analysis of the registry based data was performed with qualitative methods using content analysis. The content analysis was selected as part of the study because

large volumes of textual data from the patients' electronic medical records' could be dealt with to provide evidence, particularly on sensitive topic such as family violence. In addition, the method is commonly used in different fields, as in nursing studies and social sciences (Elo & Kyngäs, 2008; Wilson, 2011).

The questionnaires part of the study was conducted with a validated Family Functioning, Health and Social Support (FAFHES) questionnaire and analysed quantitatively with statistical analyses using the IBM SPSS programme (Statistics versions 22 and 23, IBM, Armonk, NY). The questionnaires facilitated the possibility of finding participants with a FV background without statistical diagnostic codes and participants who have also experienced other forms of violence than physical violence, which is typically used in surveys.

### 4.3 Samples and data collection

The samples and data collection are presented in Figure 3.



**Figure 3.** Samples and data collection

Both registry based data of phase one (article I) and two (article II) of the documentation in healthcare were carried out with one Finnish central hospital's database and electronic medical records, which used the Finnish Clinical Modification (ICD-10-CM) during two different five-year periods: 2008–2012 and 2013–2017.

In the questionnaires part of the study, phase three (article III) and four (article IV) included the FAFHES questionnaires data. In phase three (article III), the data were part of a larger body of data that was first collected at one central hospital in Finland from October 2012 to April 2013. The selection of the target group was based on discretion. Senior nursing officers of the different specialties made a proposal for the units involved in the study. The selected participating units of the hospital were the emergency, maternity, and ear, nose, and throat outpatient clinics, as well as the acute psychiatric, orthopedic, and cardiology wards. Each unit separately determined the correct time and number of shared questionnaires. Before the data collection, each unit were informed of the study in their department meeting by the researcher. A total of 795 questionnaires were delivered by the nursing professionals (nurses) in six different units and 371 (47%) questionnaires were returned. (Leppäkoski & Paavilainen, 2015.)

During the specific time for each unit, the questionnaires were distributed to all patients or family members who could fill in questionnaires without any specific selection criteria. The participants were given the option to fill out the questionnaire after their outpatient clinic appointments or before being discharged from the ward. It was also possible for them to take the questionnaire home and return it by mail. The participants were not paid or interviewed. As a result, for phase three (article III), the baseline data (N = 188) were derived from the patients and family members who returned the questionnaire and gave permission for a follow-up survey (Leppäkoski & Paavilainen, 2015).

In phase four (article IV), the follow-up FAFHES questionnaires were sent by mail and collected from March 2015 to September 2015. Out of 188 questionnaires, 71 were properly filled and returned (N = 71), reflecting a participation rate of 38%.

#### 4.3.1 Registry based data

Intentional injuries require both the essential and the external cause of injury code from the ICD-10 classification. Most often, the essential injury codes are obtained from Chapter XIX: Injury, Poisoning and Certain Other Consequences of External

Causes (range S00–T98). This chapter uses the S-section for coding different types of injuries related to single body regions and the T-section covers injuries to multiple or unspecified body regions. (WHO, 2016.)

The external cause of injury codes are obtained from Chapter XX: External Causes of Morbidity and Mortality (range V01–Y98). These codes are secondary codes, which should be used as complimentary codes to provide additional information about the cause of the injury. The external cause of injury codes (V01–Y98) include the injury mechanism, but also the identification of the perpetrator relationship in cases of assault. These perpetrator codes are part of the secondary codes and can be used, and added, when the first external cause code is derived from the range of interpersonal violence cases X85–Y09 (Assault). (WHO, 2016.)

First, the assault codes (range X85–Y09) presented in Table 2, which provides additional information about the causes of injury, were obtained from the hospital database.

**Table 2.** Diagnostic Codes X85–Y09 (Assault)

X85 Assault by drugs, medicaments, and biological substances
X91 Assault by hanging, strangulation, and suffocation
X94 Assault by rifle, shotgun, and larger firearm discharge
X95 Assault by other and unspecified firearm discharge
X99 Assault by sharp object
Y00 Assault by blunt object
Y04 Assault by bodily force
Y05 Sexual assault by bodily force
Y08 Assault by other specified means
Y09 Assault by unspecified means

In interpersonal violence cases, as in FV, the perpetrator relationship can be designated with specific additional codes. In the original American version of the ICD-10, code Y07 is used to designate the perpetrator relationship in assaults, whereas Y07.0 describes the diagnosis ‘spouse or partner, perpetrator of assault’. (WHO, 2016.) Our Finnish version differs, and Y07 does not designate the perpetrator, but the fourth and fifth character of the three-character Assault codes (X85–Y09) does (THL, 2011). The different perpetrator codes are presented in Table 3, using the X85 code (Assault by drugs, medicaments, and biological substances) as an example.

**Table 3.** ICD-10 Perpetrator Codes

Perpetrator code
X85.0 Assault by drugs, medicaments, and biological substances caused by spouse or partner
X85.10 Assault by drugs, medicaments, and biological substances caused by parent
X85.11 Assault by drugs, medicaments, and biological substances caused by victim's child
X85.2 Assault by drugs, medicaments, and biological substances caused by acquaintance or friend
X85.8 Assault by drugs, medicaments, and biological substances caused by other perpetrator
X85.9 Assault by drugs, medicaments, and biological substances caused by unknown perpetrator

After tracking the Assault codes (X85–Y09), the possible FV visits caused by a spouse or partner were tracked from the hospital database using the additional perpetrator codes presented in Table 4.

**Table 4.** Assault by Spouse or Partner Codes

Perpetrator code
X85.0 Assault by drugs, medicaments, and biological substances caused by spouse or partner
X91.0 Assault by hanging, strangulation, and suffocation caused by spouse or partner
X94.0 Assault by rifle, shotgun, and larger firearm discharge caused by spouse or partner
X95.0 Assault by other and unspecified firearm discharge by spouse or partner
X99.0 Assault by sharp object caused by spouse or partner
Y00.0 Assault by blunt object caused by spouse or partner
Y04.0 Assault by bodily force caused by spouse or partner
Y05.0 Sexual assault by bodily force by spouse or partner
Y08.0 Assault by other specified means by spouse or partner
Y09.0 Assault by unspecified means by spouse or partner

After tracking the spouse or partner perpetrator codes, the Assault (X85-Y09) codes without the additional perpetrator code and the essential T74.1 Physical Abuse code were also added to the data because the perpetrator codes might represent only the most obvious and most serious cases of FV. Selection criteria were patients age 18 or older, and code Y07 Other Maltreatment was excluded.

In total, the sample (N = 1302) (articles I–II), consisted of hospital visits with the selected ICD-10 codes found from the hospital database. To assess the characteristics of the victims, violence, and given care, the free text of the electronic medical records on the patients' visits were reviewed. Based on the content and information of the texts, the violence was classified as spouse or partner related or other forms of violence.

### 4.3.2 Questionnaires

The questionnaires data were collected using the Family Functioning, Health, and Social Support (FAFHES) questionnaire. The questionnaire was developed based on knowledge generated by three Finnish academic nursing dissertations concerning the family functioning, health, and social support provided by nurses (Paavilainen, 1998; Tarkka, 1996; Åstedt-Kurki, 1992). The FAFHES instrument measures the support that families receive in different life situations and its impact on family functioning and health (Paavilainen, 1998). Originally, the instrument was designed to study the families of cardiac patients, and the intention has been to modify and use the questionnaire among families with other patient groups (Åstedt-Kurki et al., 2009).

The scale of the questionnaire is a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). The FAFHES questionnaire consists of four parts: A–D. Part A consists of general characteristics, where the participants were asked about their age, gender, marital status, employment status, whether they lived in the same household as their family members, and their history of hospital visits and illnesses. Parts B to D consist of the three domain scores: family functioning, family health, and social support. (Leppäkoski & Paavilainen, 2015.)

Part B is the family functioning score consisting of 25 items about relationships between family members, family resources, and risk factors. Part C is the health score, consisting of 14 items about family values and welfare, patients' knowledge of their own or family members' health, family ill-being, and activities maintaining family well-being. Part D is the social support score, which consists of 18 items, including valuation, respect, and feelings of security, and feedback and support from the healthcare workers. (Leppäkoski & Paavilainen, 2015.) The subscales and contents of the three domain scores are described in Table 5 (Paavilainen et al., 2006).



**Table 5.** The Subscales and Contents of the Three Domain Scores of the FAFHES Questionnaire

Domain Score	Subscales	Content
Family functioning (Part B)	Family relationship Structural factors of the family Family strengths Relationship outside the family	Emotional ties and shared experiences Shared experiences and structural factors of the family Strengths inside and outside of the family, e.g., hobbies and persons Outside contacts with a close family
Family health (Part C)	Knowledge  Ill-being Activities Well-being  Values	Knowing that one is healthy based on examinations or compared with others Feelings of discomfort, such as pain and bad feelings Promoting one's health, e.g., via exercising Effortless coping, freedom from pain and symptoms, and a carefree existence Freedom, security, beauty, and relation to nature
Social support (Part D)	Affect Concrete aid Affirmation	Appreciation, respect, and creating a sense of security Spending time on matters related to illness Reinforcement, feedback, and influencing the individual's mode of decision-making

Furthermore, the questionnaire was modified and included six specific questions about physical or emotional violence at home or in the family (Table 6).

**Table 6.** Questions about physical or emotional violence at home or in the family

Part	Variable Number	Variable
General characteristics (Part A)	8	Was the violence reason for your hospital visit?
General characteristics (Part A)	9	If you answered yes to the previous question, what was the content of the violence?
Family Health (Part B)	51	I have experienced violence (physical or mental) in my home/in my family.
Family Health (Part B)	52	I've visited previously in the hospital/ health centre because of the violence that occurred in my home/ my family.
Family Health (Part B)	53	I have used violence (physical or mental) in my home/ in my family.
Family Health (Part B)	54	I have applied in the past for help from the hospital/ health centre or other place for my violent behaviour.

Two of the questions appear in part A, in which the participants were asked if the reason for the hospital visit was violence and if it was, what the content of the violence was. In the health part, four items were designed for the victims or perpetrators of the physical or emotional violence and addressed the history of

hospital visits because of the injuries or their own violent behaviour. With this questionnaire, it was possible to describe the prevalence of FV among the hospital patients who visited the central hospital, as well as to assess the association between family functioning, health, and social support, considering both men and women as perpetrators or victims of violence. (Leppäkoski & Paavilainen, 2015.)

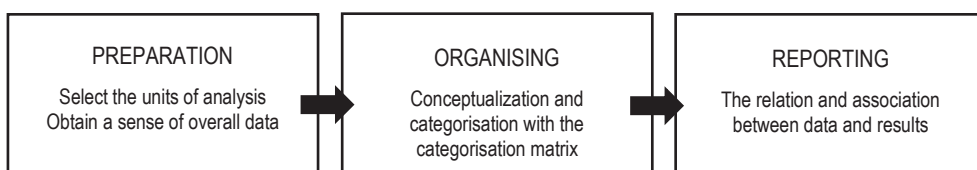
The follow-up questionnaires (article IV) were distributed to every participant from the baseline study (article III), who gave written permission for a follow-up survey. The follow-up study was conducted to follow possible changes in the prevalence of violence and the assessment of family well-being. The follow-up questionnaires were distributed and collected after two years of the baseline study, when the same participants filled out the questionnaires for the second time. The questionnaires were sent by mail and they included a return envelope with paid postage. Both questionnaires included a cover letter with the contact information of the researchers.

## 4.4 Data analysis

### 4.4.1 The content analysis of the registry based data

Data analysis of the free text from the electronic medical records was performed using content analysis. This qualitative method was employed as it is an autonomous method, which can be used at varying levels of abstraction and interpretation (Graneheim et al., 2017). In addition, the content analysis can handle large volumes of textual data, and it allows for versatile and especially sensitive phenomena to be described in a conceptual form. Using this method, it was possible to simultaneously analyse data qualitatively and quantify the data. (Elo & Kyngäs, 2008; Wilson, 2011.) The content analysis allowed for the possibility of data quantification by measuring the frequency of different categories with caution as a proxy for significance (Vaismoradi et al., 2013).

In content analysis, the results are presented as categories which include things, opinions, attitudes, perceptions, and experiences (Graneheim et al., 2017). A deductive approach is based on previous knowledge and therefore, it moves from the general to the specific. This approach is useful to compare categories at different time periods. (Elo & Kyngäs, 2008; Wilson, 2011.) The three main phases of the analysis process are described in Figure 4.



**Figure 4.** The phases of the content analysis

First, the registry based data were explored in greater detail with repeated reading to obtain a sense of the whole. Second, a deductive categorisation matrix was developed, which included the three main categories based on the research questions (articles I and II): the documentation of the violence, the characteristics of the violence, and the care given to the patients. A category describes the similarities and differences of the data with a low interpretation degree. The three different categories describe a common thread that does not vary through different parts of the data. They give direction and nuance to the data. (Graneheim et al., 2017.) All categories included correspondence questions on the selected categories (Table 7.)

**Table 7.** The Deductive Categorisation Matrix for the Data

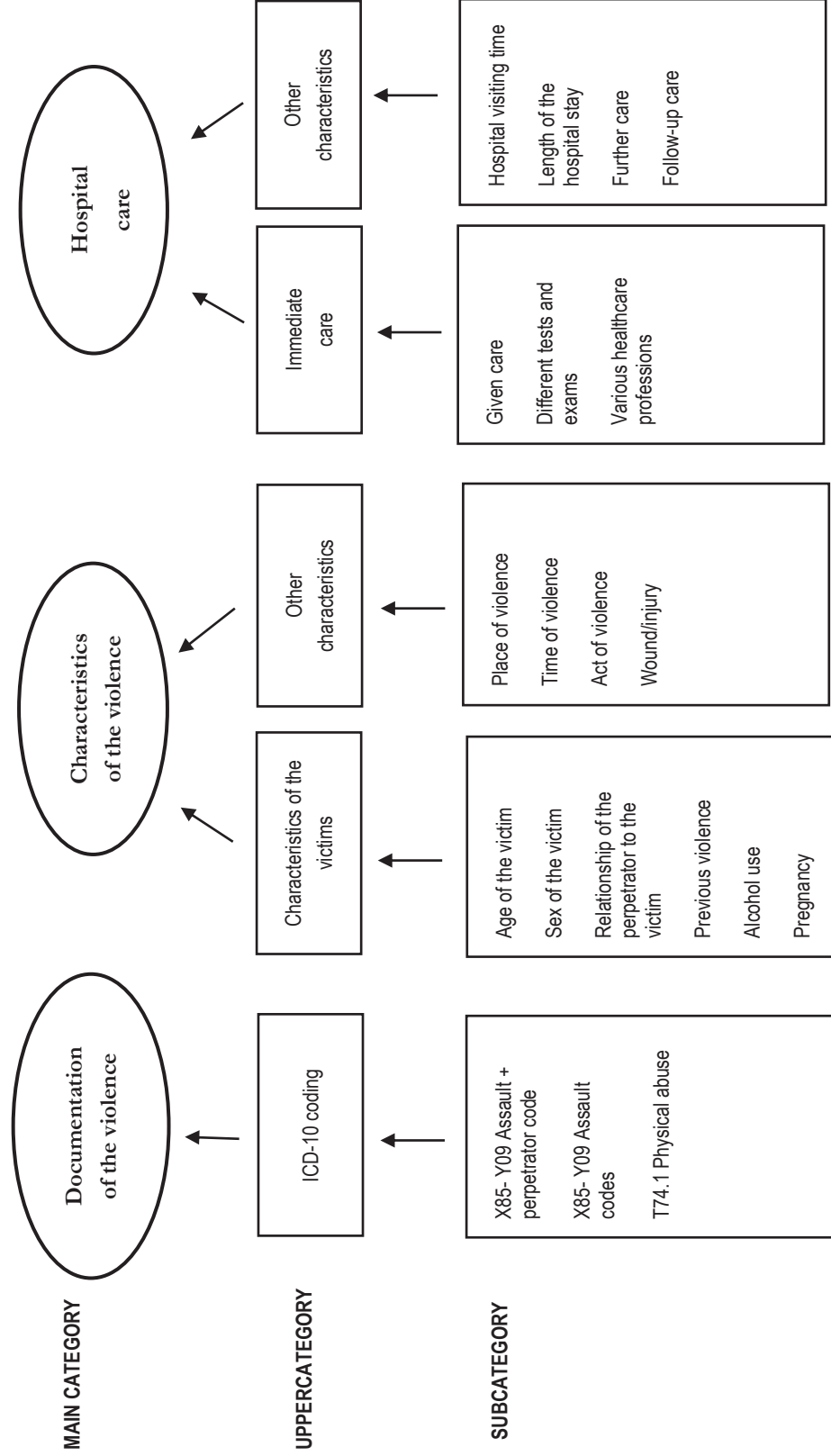
The Documentation of the Violence	Characteristics of Violence	Care Provided for the Patients
What is the ICD-10 diagnosis?	What are the age and sex of the patient?	What kind of tests and examinations were done?
Did the selected code match the content of the text in the electronic medical records?	Where did the violence happen?	Which healthcare professions participated in the care?
	Who was the perpetrator?	How many days did the patients stay in the hospital?
	What type of violence was used?	Where did the patient go from the hospital?
	What kind of injury or wound was caused by the violence?	Were the children mentioned during the care?
	Was the first visit caused by violence?	
	Are there children in the family?	

Units relevant to the main categories were systematically searched and broken up into conceptual units. The units consisted of expressions (words and sentences) which were based on their similarities and differences. These units were then coded

according to the categories to describe all aspects of the data (Elo & Kyngäs, 2008; Graneheim & Lundman, 2004; Wilson, 2011.) The categories identify and define groups of codes that share common characteristics in order to compare and contrast them with other categories. Codes can be divided into smaller subcategories or pooled into broader categories. (Graneheim et al., 2017.)

The deductive categorisation matrix included three main categories, which were used as an unconstrained matrix of the analysis. With the matrix, different upper categories and subcategories were created. The heading of the categories describes the content and defined properties of a concept, which indicates the degree of interpretation and level of abstraction. (Graneheim et al., 2017.)

One of the most significant challenges of content analysis is to describe the process of analysis and the phenomenon as reliably as possible. A key issue is to show the logic in how the conceptualisation of the data and categories are abstracted, interpreted, and connected to the aim and to each other. The relation/association between the data and results must be indicated reliably. (Graneheim et al., 2017; Janhonen & Nikkonen, 2001: 36; Kyngäs & Vanhanen, 1999.) The progress of the analysis is described in Figure 5.



**Figure 5.** The deductive content analysis process of the conceptualisation and categorisation of the different categories

#### 4.4.2 Statistical analysis of the questionnaires

The data from the structured FAFHES questionnaires were analysed using statistical analysis techniques. Altogether, 188 participants participated in the baseline study (article III) and 71 also participated in the follow-up study (article IV). Because the baseline data ( $N = 188$ ) were part of a larger body of data ( $N = 348$ ) (Leppäkoski & Paavilainen, 2015), the participants' characteristics were compared to all the participants to ensure the baseline data adequately represented the research reality. The characteristics were similar and a comparison is presented in Table 8.

**Table 8.** Comparison of the Characteristics of Participants in the Baseline Study (N = 188) to a Larger Body of Data (N = 348)

		Baseline Data (N = 188)		Larger Body of Data (N = 348)	
		%	(N)	%	(N)
Gender	Men	27	(51)	26	(91)
	Women	73	(137)	74	(256)
Age	Under 30	29	(54)	23	(80)
	30 to 59	40	(75)	46	(158)
	60 or more	31	(58)	31	(109)
Marital status	Married/living with partner	85	(159)	84	(292)
	Single (single, divorced, separated, widow)	15	(29)	16	(55)
Employment status	Working	31	(57)	31	(109)
	Not working (unemployed, sick leave, pension, other)	69	(130)	69	(238)
Living in the same household with family members	Yes	81	(152)	82	(284)
	No (no or with some family members)	19	(35)	18	(62)
Hospital unit	Outpatient clinic	68	(125)	70	(245)
	Ward	21	(39)	30	(103)
	Other	11	(21)		
Hospital visit	Own visit	95	(178)	96	(331)
	Child's or other relative's visit	5	(10)	4	(15)
Hospital care because of the violence	Yes	1	(2)	1	(3)
	No	99	(185)	99	(343)
The length of the hospital visit	Less than one day	70	(121)	70	(223)
	1 to 6 days	21	(36)	22	(70)
	One week or more	9	(15)	8	(24)
Previous hospital visit because of the same illness or symptoms	Yes	71	(125)	69	(225)
	No	29	(52)	31	(100)
The number of previous hospital visits	One to two times	30	(37)	32	(73)
	More than two times	70	(87)	68	(155)
Procedures done earlier in the previous hospital visit	Yes	60	(100)	66	(207)
	No	40	(68)	34	(106)

To describe the data, frequencies, and percentages, measures of central tendency (mean and median), variability (standard deviation, range, and lower and upper quartiles), symmetry (skewness) and peakedness (kurtosis) were used as appropriate. In addition, the Chi-square test and Fisher's exact test were used to compare general

characteristics between the different groups. Furthermore, the Mann-Whitney-U and Kruskal-Wallis tests were used to compare the unadjusted scores of the family functioning, health, and social support among the three selected groups (no violence, perpetrators and victims). In the baseline study (article I), the skewed FAFHES variables were also square transformed and modelled using linear regression with gender, marital status, and living in the same household with family members as covariates, together with the three-group violence variable (no violence, perpetrators, or victims). The level of significance was set as  $p < 0.05$  (Freeman & Walters, 2015; Stark & Hedgecoe, 2010; Walters & Freeman, 2015). All statistical analyses were performed using IBM SPSS Statistics (versions 22.0 and 23.0, Armonk, NY, IBM Corp.).

Participants with or without violence were classified into categories to compare their characteristics and the three domain scores. Family functioning, health, and social support are the three domain scores, and every domain had to have 80% of the items answered. The number of items varied in each domain, and the minimum number of answered items varied from 20 of 25 for family functioning, 11 to 14 for health, and to 14 of 18 for social support.

In both studies (article III–IV), the participants with or without violence were classified into three categories based on the four specific violence questions in the health part presented in Table 9. The variables were categorised into two groups: scaling 1 to 3 with no violence and 4 to 6 with violence.



**Table 9.** Violence Variables of the FAFHES Questionnaire

Variable Number	Variable	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
51	I have experienced violence (physical or mental) in my home/in my family.	1	2	3	4	5	6
52	I've visited previously in the hospital/ health centre because of the violence that occurred in my home/ my family.	1	2	3	4	5	6
53	I have used violence (physical or mental) in my home/ in my family.	1	2	3	4	5	6
54	I have applied in the past for help from the hospital/ health centre or other place for my violent behaviour.	1	2	3	4	5	6

The three classified categories of the participants with or without incidents of violence are presented in Figure 6. In the baseline and follow-up FAFHES questionnaires data (articles III–IV), the first group comprised participants who experienced no violence at home or in the family. The second group was composed of perpetrators who had used violence and/or sought help from a healthcare professional due to their violent behaviour. The third group comprised victims who had experienced violence and/or had previous hospital visits because of the injuries.

Participants with or without violence Baseline and follow-up FAFHES study (articles III–IV)		
<b>No violence</b> (first group)  All variables 51–54, including scales 1 to 3 (Table 9)	<b>Perpetrators or perpetrators and victims</b> (second group)  Variable 53 or 54 or both, including scales 4 to 6 <b>AND</b> variables 51 and 52, including scales 1 to 6 (Table 9)	<b>Victims</b> (third group)  Variable 51 or 52 or both, including scales 4 to 6, <b>AND</b> both variables 53 and 54, including scales 1 to 3 (Table 9)

**Figure 6.** The categories of participants with or without violence

To assess changes in the continuation of violence in the follow-up study (article IV), the participants were additionally classified into three new categories (Figure 7) for comparison to the baseline study (article III). The first group of participants was composed of those who had never used or experienced violence at home. The second group included participants who had reported using or experiencing violence in the baseline study, but the violence had stopped by the follow-up study. The third group included participants who reported being perpetrators and/or victims of violence during both studies.

<b>Continuation of violence</b> Same participants of the baseline and follow-up FAFHES study (articles III-IV)		
<b>No violence</b> (first group)  All variables 51–54, including scales 1 to 3 (Table 9), during both studies	<b>Violence stopped</b> (second group)  One or more variables of 51-54, including scales 4 to 6 (Table 9), in the baseline study <b>AND</b> all variables 51–54, including scales 1 to 3 (Table 9), in the follow-up study	<b>Violence continued</b> (third group)  One or more variables of 51-54, including scales 4 to 6 (Table 9), during both studies

**Figure 7.** The categories of the continuation of violence

#### 4.4.3 Synthesis of the registry based and questionnaires data sets

The final synthesis included systematically distilled and integrated data from all the registry based data and questionnaires findings (articles I–IV) in order to create generalisations and draw broader and more reliable conclusions about the FV phenomenon (Flemming, 2007; Valentine et al., 2009). The aim of the synthesising was to reach an overall understanding of the problem and to identify sources of variation in outcomes (Gurevitch et al., 2018). This synthesis consisted of all the previous study findings regardless of the aims or differences in the way the phases (articles I–IV) were produced. All the findings were critically analysed together (Sandelowski et al., 2012; Valentine et al., 2009). This act of seeing four phases (articles I–IV) as ‘the same’ allowed the findings to be combined to form the synthesis using inductive content analysis.

During the analysis, attention was paid to identify the central contents of the findings and combine them together. First, the findings from the electronic medical records and questionnaires were divided into areas of similar content that were condensed and coded. The codes were systematically collected across the entire data set. The codes were interpreted and compared for differences and similarities and sorted into tentative characteristics for the categories. (Graneheim et al., 2017.) The findings were conceived as thematically diverse and therefore the findings could extend, explain, and modify each other. All the findings were viewed as potentially

related and linked together, even though their relationship was not immediately evident or addressed in the original phases. (Sandelowski et al., 2012.)

Second, areas of similar content and characteristics that were relevant to each other were grouped together into four different categories, which constitute the manifest content. After this, the latent content, of the categories, was formulated into themes. (Graneheim, & Lundman, 2004.) Through a process of reflection and discussion, two descriptive themes were formulated that unified the content in the categories. The themes were defined and named by generating clear definitions for each theme, which refined the specifics of each theme and the overall story that the synthesis tells. The two themes illuminate the comprehensive interpretation of the whole data. (Elo & Kyngäs, 2008; Graneheim et al., 2017.)

Finally, the themes were reviewed to check if the themes worked in relation to the extracts and the entire data set. Examples of characteristics, categories, and the themes are given in Figure 8.

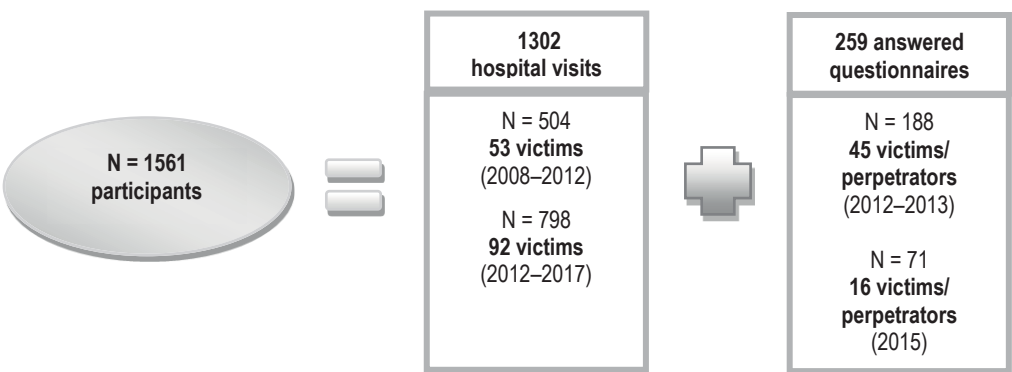
THEME	VIOLENCE IN THE LIFE OF INDIVIDUAL		VIOLENCE IN THE COMMUNITY	
CATEGORIES	VICTIM	HEALTHCARE	FAMILY	SOCIETY
CHARACTERISTICS	<div>Risk factors</div> <div>Acts of violence</div> <div>Wounds and injuries</div>	<div>Documentation</div> <div>Visiting TIME</div> <div>Used diagnoses</div> <div>Cooperation</div> <div>Given care</div>	<div>Roles in the family (no violence, perpetrator, victim)</div> <div>Supporting factors</div> <div>Family functioning, health, and social support</div>	<div>Missing perpetrator codes</div> <div>The amount of hospital visits</div> <div>Service cooperation</div> <div>Violence during pregnancy</div> <div>The amount of sick leaves</div>

**Figure 8.** The inductive content analysis process of the conceptualisation and categorisation of the different themes

# 5 RESULTS

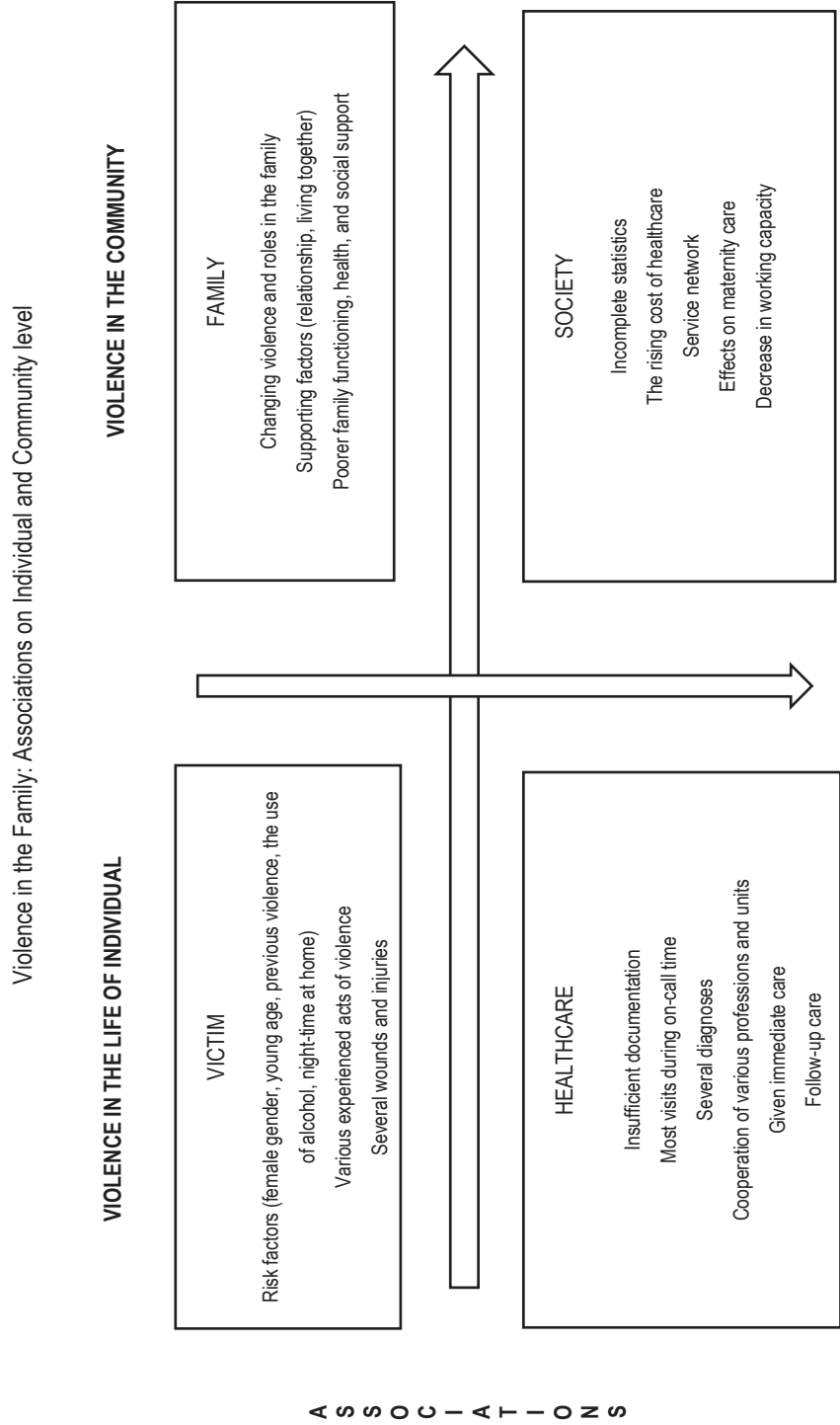
The synthesis of the results displayed here consisted of four different phases (articles I–IV) of this study. The results are presented in accordance with the research questions outlined in Section 3. The original articles I–IV display the detailed results regarding the research questions, including statistics.

Overall, the synthesis consisted of data on 1561 participants as presented in Figure 9. In total, 206 (13%) participants had used or experienced violence at home or family. Of these, 145 victims were found from the hospital medical records (articles I–II) and 61 victims or perpetrators from the FAFHES questionnaires (articles III–IV).



**Figure 9.** The data of the synthesis

As a result, the synthesis of the documentation and associations of the FV are presented in Figure 10. A total of four themes were found, describing the relation and association between the findings. The themes were named based on their associations on individual or community level. These themes identify and share common characteristics in order to compare them with other themes.



**Figure 10.** Synthesis of the associations of FV on the individual and community level

## 5.1 Victims of the violence (articles I–II)

Gender (female), young age, previous violence, the use of alcohol, and night-time at home increased the risk of FV hospitalisation. The majority (93%) of the patients were women and of all of the patients, more than half (61%) were under 40 years old (Table 10). Over half (59%) of the violence happened to women under 40 years old.

**Table 10.** Characteristics of the Hospitalised Patients (N = 145)

Patient (X85–Y09 or T74.1)		n	%
Gender	Men	10	7
	Women	135	93
Age	Under 40	89	61
	40 or more	56	39
Age (men)	Under 40	4	3
	40 or more	6	4
Age (women)	Under 40	85	59
	40 or more	50	34

Most of the violence happened at night-time and the perpetrator was usually the victim's husband or boyfriend. In the follow-up study (article II), every one in ten (10%) incidents of violence were caused by the ex-partner or spouse. Most of the patients experienced violence at home, and the other places included other apartments, bars or restaurants, public places, and cars. Alcohol was mentioned in several patients' medical records. The perpetrators, victims, or both parties had used alcohol in every fifth (23%) visit in the baseline study (article I), and more than half (58%) had used alcohol before the violence in the follow-up study (article II). In both studies, every fourth (24%) patient mentioned previous violence in their relationships.

Various acts of violence were used among hospitalised FV patients, causing several injuries as presented in Table 11. The most common acts of violence were hitting the head or face (30%), throwing or buffeting (23%), and strangulation (21%). Most of the wounds and injuries were contusions in the head or face (16%), and in the body (15%). Every tenth patient (12%) had bodily pain. Eleven fractures included fractures of the eyelid, jaw, clavicle, hand, finger, tibia, and ankle.

**Table 11.** Characteristics of the Violence of 145 Hospitalised IPV Patients (2008–2017)

Act of Violence	N	Wound/Injury	N
Hit the head or face	57	Contusions in the head or face	45
Thrown or buffeted	43	Contusions in the body	43
Strangled	39	Bodily pain	35
Hit with an object to head	19	Headache	30
Kicked in a body	19	Bruises in the body	23
Kept on hold	18	Swelling in the head or face	21
Hacked a head against something	16	Bruises in the head or face	17
Torn hair	14	Bump in the head	14
Hit in a body	12	Fracture	11
		Momentary unconsciousness	10
Twisted or pressed a limb	9	Visual symptoms	9
Kicked in a head	8	Swelling in the body	8
Threatened verbally	6	Nausea	7
Hit with an object to body	5	Concussion	7
Stabbed	7	Stabbing wound	7
Sat on	4	Vomiting	5
Bitten	6	Dizziness	5
Pressed/torn the faces	4	Facial pain	4
Insulted	2	Broken or swinging tooth	3
Scratched	2	Nosebleed	3
		Bite wound	2
		Bleeding from the ear	2
		Molten eye or eyes	2
Hit with an object to body	1	Loss of hearing	1
Sexual violence	1	Limping	1
Threatened with a knife	1	Nail traces in the body	1
Pressed hand to mouth and nose	1	Broken hair	1
Pepper spray on the face	1	Brain injury	1
Pushed head on a snow	1	Hematoma in the eye	1
Raped	1	Gynecological bleeding	1
Vomited in the mouth	1	Bleeding from the mouth	1
Extruded from the testicles	1	Hard to open mouth	1
Trying to push fingers in eyes	1	Humming in ears	1
Total	189		283

## 5.2 Violence in the family (articles III–IV)

The general characteristics of the FAFHES participants (articles III–IV) are presented in Table 12. The majority of the participants were women in both studies. In the baseline study (article III), the average age was 45 years, and the age varied between 18 and 89 years. In the follow-up study (article IV), the average age was 55 years, and the age varied from 23 to 83 years.



**Table 12.** General Characteristics of the FAFHES Participants in the Baseline Study (N = 188) and the Follow-up Study (N = 71)

		N = 188 2012	N = 71 2015
Gender	Men	51 (27%)	19 (27%)
	Women	137 (73%)	52 (73%)
Age	Under 30	54 (29%)	13 (19%)
	30 to 59	75 (40%)	19 (27%)
	60 or more	58 (31%)	38 (54%)
Marital status	Married/living with partner	159 (85%)	66 (93%)
	Single (single, divorced, separated, widowed)	29 (15%)	5 (7%)
Employment status	Working	57 (31%)	21 (30%)
	Not working (unemployed, sick leave, pension, other)	130 (69%)	49 (70%)
Living in the same household with family members	Yes	152 (81%)	62 (87%)
	No (no or with some family members)	35 (19%)	9 (13%)
Hospital unit	Outpatient clinic	125 (68%)	47 (67%)
	Ward	39 (21%)	18 (26%)
	Other	21 (11%)	5 (7%)
Hospital visit	Own visit	178 (95%)	-
	Child's or other relative's visit	10 (5%)	-
Hospital care because of the violence	Yes	2 (1%)	-
	No	185 (99%)	71 (100%)
The length of the hospital visit	Less than one day	121 (70%)	48 (74%)
	1 to 6 days	36 (21%)	13 (20%)
	One week or more	15 (9%)	4 (6%)
Previous hospital visit because of the same illness or symptoms	Yes	125 (71%)	49 (73%)
	No	52 (29%)	18 (27%)
The number of previous hospital visits	One to two times	37 (30%)	18 (37%)
	More than two times	87 (70%)	31 (64%)
Procedures done earlier in the previous hospital visit	Yes	100 (60%)	41 (65%)
	No	68 (40%)	22 (35%)

The experienced violence varied and changed over time in the family, but the same prevalence continued during both studies (articles III–IV). In total, a quarter of the participants (23%) had experienced or used violence at home or in the family. One-fifth (21%) continued to experience violence in their relationships. The prevalence of the violence and the characteristics of the participants between group comparisons are presented in Table 13.

**Table 13.** Characteristics of Participants and Violence in the Baseline Study (N = 188) and the Follow-up Study (N = 71)

	No violence		Perpetrators		Victims	
	2012 (N = 143)	2015 (N = 55)	2012 (N = 22)	2015 (N = 4)	2012 (N = 23)	2015 (N = 12)
<b>Gender</b>						
Male	39 (76%)	15 (78%)	4 (8%)	2 (11%)	8 (16%)	2 (11%)
Female	104 (76%)	40 (77%)	18 (13%)	2 (4%)	15 (11%)	10 (19%)
<b>Age</b>						
Under 30 years	42 (78%)	8 (61%)	6 (11%)	1 (8%)	6 (11%)	4 (31%)
30 to 59 years	60 (80%)	14 (74%)	8 (11%)	1 (5%)	7 (9%)	4 (21%)
60 or more years	40 (69%)	34 (89%)	8 (14%)	-	10 (17%)	4 (11%)
<b>Marital status</b>						
Married/living with partner	128 (81%)	52 (79%)	16 (10%)	4 (6%)	15 (9%)	10 (15%)
Single	15 (52%)	3 (60%)	6 (21%)	-	8 (27%)	2 (40%)
<b>Employment status</b>						
Working	50 (88%)	15 (71%)	3 (5%)	1 (5%)	4 (7%)	5 (24%)
Not working	93 (71%)	39 (80%)	19 (15%)	3 (6%)	18 (14%)	7 (14%)
<b>Living in the same household with family members</b>						
Yes	123 (81%)	49 (79%)	14 (9%)	4 (6%)	15 (10%)	9 (15%)
No	19 (54%)	6 (67%)	8 (23%)	-	8 (23%)	3 (33%)

Among the baseline participants (article III), most violence had been experienced by participants over 60 years (31%). However, in the follow-up (article IV) conducted with the same participants as in the baseline study (article III), most victims were under 30 years old (39%). Both men and women were victims and perpetrators. In the baseline study (article III), every one in five (19%) had violence in their relationships. Of these participants, 33 (73%) were women, 12 (27%) were men, 22 (49%) were perpetrators, and 23 (51%) were victims. In total, 22 participants were perpetrators, 18 women and 4 men. Six women and 1 man were only inflicting violence, and 12 women and 3 men were both perpetrators and victims. In total, 23 participants were victims of violence. Of these participants, 8 were men and 15 were women. Nearly half of the patients (47%) who stayed one week or more in the hospital had experienced violence. In the follow-up study, of the four perpetrators, two were women and two were men. Among the victims, two were men and 10 were women.

Only two participants reported FV as the reason for the hospital visit in the baseline study (article III). One of them had experienced physical violence when her husband hit her, and the reason for the hospital care was her suicide attempt. The

other participant had been a victim of emotional violence, and the reason for the hospital care was the family's concern regarding her burden. Both of these patients were also perpetrators of violence, according to their own responses.

The general characteristics of the different groups were compared, and significant differences were found in the baseline study (article III). Participants in relationships ( $p = 0.003$ ) and those who were living together ( $p = 0.004$ ) had less violence than those who were single or not living together within group in time. In addition, family functioning, health, and social support were worse for those who did not live with family members when linear regression models with square-transformed dependent variables and covariates were assessed (Table 3 in article III).

In the baseline study ( $N = 188$ ) (article III), the between groups and gender comparison with family functioning, health, and social support are presented in Table 14. Significant differences were found between patients with violence experiences. For participants who used or experienced violence, their family functioning ( $p = 0.002$ ) and health ( $p = 0.004$ ) were worse than those of participants without FV. Both family functioning ( $Mdn = 4.08$ ) and health ( $Mdn = 4.71$ ) were comparatively worse among the perpetrators, and family functioning in particular was poor among the perpetrators. Moreover, significant differences were found between gender and health ( $p = 0.043$ ). Female participants experienced better health than their male counterparts. However, there was no significant difference between the groups with regard to social support, although it seemed to be slightly lower among the perpetrators. The interpretation of the effect of FV on family functioning, health, and social support did not change when linear regression models with square-transformed dependent variables and covariates were assessed (Table 3 in article III).

**Table 14.** Median Values of Family Functioning, Health and Social Support of Participants ( $N = 188$ ) Who Visited One Central Hospital in Finland from October 2012 to April 2013

	Family Functioning	Family Health	Social Support
Overall median	4.84	4.93	5.00
No violence	4.98	5.00	5.00
Perpetrator	4.08	4.71	4.78
Victim	4.56	4.79	5.06
p-value*	0.002	0.004	0.258
Men	4.76	4.79	5.00
Women	4.96	5.00	5.00
p-value**	0.079	0.043	0.654
*Kruskal-Wallis test; **Mann-Whitney test			

For those participants who completed the questionnaire in both 2012 and 2015 (articles III–IV), the overall medians for family functioning and social support had decreased over time. Significant differences regarding family functioning, family health, and social support were found between participants. The between groups and gender comparison with family functioning, health, and social support are presented in Table 15.

**Table 15.** Median Values of Participants in the FAFHES Questionnaire Between Group Comparisons

	Family Functioning		Family Health		Social Support	
	2012	2015	2012	2015	2012	2015
	N = 187	N = 68	N = 186	N = 68	N = 187	N = 68
Overall median	4.84	4.76	4.93	4.93	5.00	4.67
No violence	4.98	4.92	5.00	4.93	5.00	4.72
Perpetrator	4.08	4.68	4.71	5.32	4.78	4.39
Victim	4.56	3.76	4.79	4.36	5.06	4.09
p-value*	0.002	0.005	0.004	0.041	0.258	0.017
	N = 68	N = 68	N = 68	N = 68	N = 64	N = 65
Overall median	4.96	4.76	5.00	4.93	5.06	4.64
No violence	5.00	4.92	5.07	4.93	5.03	4.72
Violence stopped	4.83	4.60	4.77	4.79	5.06	4.82
Violence continued	4.61	3.92	4.89	4.67	5.00	4.17
p-value*	0.320	0.014	0.163	0.286	0.939	0.041
	N = 187	N = 69	N = 186	N = 69	N = 175	N = 66
Overall median	4.84	4.76	4.93	4.93	5.00	4.64
Men	4.76	4.96	4.79	4.93	5.00	5.00
Women	4.96	4.48	5.00	4.86	5.00	4.53
p-value**	0.079	0.078	0.043	0.382	0.654	0.015

\*Kruskal-Wallis test;

\*\*Mann-Whitney test

However, in the follow-up data (article IV), the victims reported worse family functioning (Mdn = 3.76), health (Mdn = 4.36), and social support (Mdn = 4.09) than either the perpetrators or the participants who had not experienced violence. Specifically, family functioning was poor for the victims. Both family functioning (Mdn = 4.92) and social support (Mdn = 4.72) were comparatively high among the participants with no experience of violence. However, family health was highest among the perpetrators (Mdn = 5.32).

Significant differences were found in family functioning and social support in the follow-up (article IV). For participants who were continuing to experience violence,

their family functioning (Mdn = 3.92) and social support (Mdn = 4.17) were worse than for those participants who had not experienced violence. Participants who had never experienced violence reported the highest family functioning (Mdn = 4.92). Moreover, the highest social support (Mdn = 4.82) was received among participants whose violence had ended.

In relation to gender, significant differences were revealed in social support ( $p = 0.015$ ) in the follow-up study (article IV). Women reported worse social support (Mdn = 4.53) than men (Mdn = 5.00). However, significant differences were not found between gender groups in regard to family functioning and health, although both seemed to be slightly poorer among the women. The overall medians decreased in every domain, except health, which remained the same.

## 5.3 Violence in healthcare (articles I–II)

### 5.3.1 Documentation in healthcare

The baseline registry based (article I) and follow-up (article II) samples consisted of 1302 hospital visits during the years 2008 to 2017 as presented in Table 16. Of these visits, 625 (48%) included the External cause of injury code X85-Y09 and 677 (52%) visits included the T74.1 Physical abuse code. The number of total visits had increased every year.

**Table 16.** Diagnostic Codes X85–Y09 and T74.1, 2008–2017

X85–Y09 and T74.1 (N = 504 + 798)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	N	%
X85 Assault by drugs, medicaments, and biological substances		1	1		-			7	15	11	35	3
X91 Assault by hanging, strangulation, and suffocation	1			1	-	2	1		4		9	1
X92 Assault by drowning and submersion	5				-						5	-
X93 Assault by handgun discharge				1	-						1	-
X94 Assault by rifle, shotgun and larger firearm discharge					-					1	1	-
X95 Assault by other and unspecified firearm discharge		1		2	-	3	3		11	6	26	2
X99 Assault by sharp object		7	4	3	-	10	10	8	20	15	77	6
Y00 Assault by blunt object		4	8	4	-	2	11	1	2	7	39	3
Y04 Assault by bodily force	25	46	35	31	-	28	28	51	30	35	309	24
Y05 Sexual assault by bodily force	1	1			-	4	3	3		2	14	1
Y08 Assault by other specified means		2	6	4	-	3	6	4	5	10	40	3
Y09 Assault by unspecified means	4	2		2	-	8	2	7	21	23	69	5
T74.1 Physical abuse	85	52	57	50	58	38	51	86	78	122	677	52
Total	121	116	111	98	58	98	115	167	186	232	1302	100

In total, of the 1302 visits, 34 visits (3%) were coded as spouse or partner-related violence using the additional perpetrator code. The reported types of spouse or partner-related violence are presented in Table 17.

**Table 17.** Spouse or Partner Perpetrator Codes, 2008–2017

	2008–2011	2008–2012 The reality	2012–2017
X91.0 Assault by hanging, strangulation, and suffocation caused by spouse or partner	1		4
X93.0 Assault by rifle, shotgun and larger firearm discharge caused by spouse or partner	1		
X99.0 Assault by sharp object caused by spouse or partner	3	1	2
Y00.0 Assault by blunt object caused by spouse or partner	1		1
Y04.0. Assault by bodily force caused by spouse or partner	14	9	5
Y05.0 Sexual assault by bodily force by spouse or partner	1		
Y08.0 Assault by other specified means by spouse or partner	1		
Total	22	10	12

However, the use of the perpetrator codes resulted insufficient. In the registry based baseline study (article I), of the 22 visits, more than half (55%) were not actually caused by the spouse or partner according to a review of the medical records. The perpetrator was reported to be a person other than the spouse or partner and one visit was not caused by violence. In total, only 10 visits were caused by a spouse or partner in the baseline study. Hence, 22 patients were documented with the proper perpetrator codes. Overall, the most reported type of violence was Y04.0 Assault by bodily force caused by spouse or partner and Y00.0 Assault by blunt object caused by spouse or partner. From the follow-up data (article II), 10 more patients were found, who only had the three-character external cause of injury code (X85-Y09).

As presented in Table 18, an analysis of the essential code T74.1 (Physical abuse) revealed various perpetrators of violence and overall, the amount of these visits had increased during the 10-year period extending from 2008 to 2017 (articles I–II). Over half of all visits (57%) concerned a person unknown to the victim as the perpetrator or no information present concerning the perpetrator. However, every fifth patient (22%) had experienced violence in the relationship caused by the ex-partner or spouse. Almost every fifth (19%) visit with a T74.1 code was partner or spouse related.

**Table 18.** Relationship of the Perpetrator to the Victim by T74.1 Code from 2008 to 2017

Perpetrator, T74.1 (N = 677)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	N	%
Spouse or partner	11	9	6	10	10	10	7	22	12	31	128	19
Ex-spouse or partner	2	2	3	3			2		2	2	16	3
Acquaintance or friend	20	11	9	7	10	11	11	23	15	24	141	21
Person unknown to the victim	38	15	29	20	19	7	15	20	17	32	212	32
Unspecified person	9	9	6	9	17	10	16	21	32	33	162	25
Total	80	46	53	49	56	38	51	86	78	122	659	100



In the registry based baseline data (article I), the T74.1 code consisted of 302 visits, but 18 visits were control visits of same patients after their first hospital visits. As a result, the T74.1 code consisted of 284 patients. Of these visits, a total of 46 patients had experienced violence in their relationship. Three of these patients were the same as in the previous X85-Y09 sample because they had both T74.1 and the perpetrator code from the additional codes X85-Y09. As a result, 43 patients had experienced violence in their relationship, but had only the essential T74.1 physical violence without the perpetrator code.

In the registry based follow-up data (article II), the T74.1 code consisted of 623 visits, of which 88 visits were spouse or partner related. Of these visits, six included the same patients who had the perpetrator code because they had both the T74.1 and perpetrator code from the complimentary codes X85-Y09. In addition, 12 visits were control visits after the first hospital visits. As a result, 70 patients had experienced violence in their relationship, but had only the essential T74.1 physical violence code.

### 5.3.2 Given care in hospital

Of the 145 hospitalised patients, hospital care was possible to analyse from 102 patients medical records. The baseline study (article I) was collected in two parts and only the External cause of injury code X85-Y09 data included all the medical records. The T74.1 code part of the data included only the physicians' documentation without the care part concerning the nurses. Hence, 43 patients' hospital care was not possible to analyse completely. The follow-up data (article II) included all the medical records.

Both male and female patients needed hospital care, and most patients were identified from the emergency department visits during the on-call time (the evening or night-time). Of the 102 patients, 16 (16%) stayed in the central hospital more than one day. The length of the stay was calculated from the number of full and partial days a patient was in the hospital. One patient day was counted for same-day patients (admitted and discharged from the hospital on the same day). Of the hospitalised patients, one victim was referred to a university hospital, one was referred to a healthcare centre, and one was transferred to a shelter. In the follow-up study (article II), more than half (66%) of the patients had two or more diagnostic codes during the hospital visit. The number of diagnostic codes varied from one to seven for one patient.

The hospital care included the cooperation of various professions and units. The characteristics of the hospital care provided are presented in Table 19. Hospital care included mostly vital measures, radiological and laboratory examinations, as well as wound care and the administration of pain medication. Overall, almost half of the patients' (45%) injuries were photographed. The amount of photographs had increased from one patient in the baseline study to 45 in the follow-up study. Of the 102 patients, five (5%) underwent operations. The operations were needed for the chest stabbing injury, and the jaw, knee, tibia, and ankle fractures.

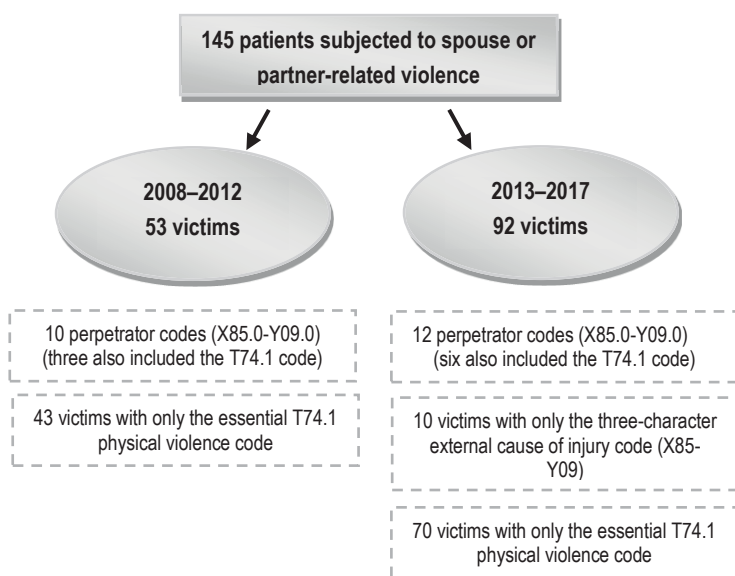
**Table 19.**      Characteristics of Hospital Care

Nursing Care	Different Tests and Examinations	Special Care
Vital signs	Radiologic testing	Mental aid/crisis intervention
Pain medication	Laboratory tests	Wound suturing
Wound care	Gynecological examination	Splinting/plaster/binding
Commotion tracking		Photographing injuries
Instructions		Child welfare report
Cold bag		Operation
Wound care instructions		Patient guidelines for violence
Antibiotic		Plaster therapy patient instructions
Tetanus vaccine		
Eye flushing		

After the first hospital visits, 18 patients needed several additional visits. The amount of these visits varied from one to ten. Most of the visits were polyclinic control visits, but also new emergency visits because of the pain, previous injuries, or psychological symptoms. One patient needed re-operation twice.

### 5.4    Violence in the society (articles I–II)

Overall, the number of hospital visits increased during the study (articles I–II). In total, 145 patients subjected to spouse or partner-related violence were found as presented in Figure 11. Unfortunately, only 22 patients' (15%) medical records included the proper spouse or partner perpetrator code. Hence, 123 (85%) patients' medical records were found to be missing the perpetrator code.



**Figure 11.** Documented hospitalised victims subjected to spouse or partner-related violence

The care required for FV causes rising costs to society. In total, the number of hospital visits increased during the 10-year period (2008–2017) and most of the visits happened during the on-call time (articles I–II). Cooperation between several professionals is needed in the comprehensive care of the patients. The necessary service network includes police, child protection, safety shelters, and several healthcare offices as health centres and specialised medical care in the university hospitals. Maternity care is also affected and plays an important role in the violence care because of the 135 women patients, seven (5%) were pregnant during the act of violence (articles I–II).

Besides the significant disadvantage caused by the injuries to the victims, the injuries influence the labour market in the decrease in working capacity. One patient had a permanent disability because of the violence (article I) and in the follow-up study (article II), patients were prescribed sick leave that totalled 10 months and 3 weeks.

## 6 DISCUSSION

### 6.1 Summary of the main findings

Even though, violence in the family is seen as a private matter, FV has several associations on individual and community level. The study findings revealed three main findings.

First, the documentation of FV in healthcare was insufficient. The proper ICD-10 perpetrator codes were used poorly, and the used codes didn't always match to the content of the patients' medical records. Second, the violence and the roles (perpetrator, victim, or perpetrator and victim) varied, and the well-being of the victims and perpetrators was poorer than participants without violence. Third, the care of the FV patients required various healthcare resources (examinations, operations, multiple hospital admissions especially during on-call time) and cooperation of multiple professionals.

In the following, the results are discussed according to the research questions:

1. Victims of the violence:  
The risk factors and characteristics related to victims of FV in healthcare.
2. Violence in the family:  
The association between family functioning, health, and social support for participants who have or have not experienced violence.
3. Documentation and care of family violence patients in healthcare:  
The documentation of FV patients and given care in the healthcare.
4. Violence in the society:  
The association of FV to society.

#### 6.1.1 Victims of the violence

Both men and women experienced violence and violence was experienced in every age group. Most of the patients hospitalised for violence were under 40 years old (61%) and in the FAFHES follow-up study, many of those patients were under 30

years old (39%). However, in the FAFHES baseline study, most violence was experienced by those over 60 years old (31%). Notably, all male victims were over 60 years old. In comparison to other age groups, the proportion of older victims requiring hospitalisation was very small (only two patients), as in the Pointer & Kreisfeld (2012) study. Female gender, young age, the use of alcohol, and night-time increased the risk of family violence, consistent with previous research (Ağçay et al., 2015; Bonomi et al., 2009; Btoush et al., 2008; Jethá et al., 2011; Schafer et al., 2008). In the study conducted by Choi et al. (2015), most male victims were aged 40 or older. In spite of the small number of older victims, 28% of older women have experienced violence or abuse in the last 12 months in Europe, and the perpetrators have, in most cases, been partners or spouses (Luoma et al., 2011).

For those studies containing specific information on location, the home was the most commonly reported place of assault. For both women and men, victims assaulted at home had an elevated risk for violence. Particularly among women, FV victims were more likely than non-FV victims to be assaulted at home (Yau et al., 2013.)

Various acts of violence were used, causing several injuries and fractures. Victims were most often hit in the head or face (30%), thrown or buffeted (23%), and strangled (21%). Hence, most common FV-related injuries were localised in the HFN (head, face, and neck) areas, as in the previous studies (Curca et al., 2012; Matteoli et al., 2016; Trojan & Krull, 2012). Consistent with other studies, the findings suggested that victims experience multiple superficial injuries and contusions, especially to the head and trunk, and present with bodily pain (Danielle et al., 2015; Perciaccante et al., 2010; Yau et al., 2013). Oral and maxillofacial traumas are very common among female victims, generating high social and economic costs (de Macedo Bernardino et al., 2018). In addition, most of the victims presented with defence injuries on the upper limbs and/or fall-related injuries on the prominent parts of the body. Ideally, the victim should seek healthcare as fast as possible after violence to maximise injury identification. Some lesions fade or disappear after only a few days, decreasing characterisation accuracy and dating. (Curca et al., 2012.) According to Vatnar & Bjørkl (2013), both physical and psychological violence can be lethal. Most of the FV victims subjected to any kind of physical violence perceived that they had felt that their life was in danger during the abuse. Moreover, during the psychological violence, victims who perceived that their life was in danger had been threatened verbally with being killed. (Vatnar & Bjørkl, 2013.)

### 6.1.2 Violence in the family

The results revealed that the violence varied and changed over time. Violence ended, started, or continued, and the roles changed from perpetrator to victim and vice versa. In total, the prevalence of FV remained constant: About one-quarter of the participants reported experiencing violence in both FAFHES studies. One in five (21%) continued experiencing violence in their relationships. Men and women both experienced and perpetrated violence. This finding was consistent with that of previous research (Hamberger & Larsen., 2015).

Participants' marital status and living together in the same household with family members was associated with violence. Not being in a relationship and not living together increased the risk of violence compared with being in a relationship and living together. Marital status was also found to be related to the risk of FV, based on the findings of studies conducted by Leone et al. (2010) and Gustafsson & Cox (2016). In addition, power dynamics appear to influence relationships. If couples do not make decisions together, there is a greater likelihood of FV (Flake & Forste, 2006). Because of holding unequal power with men in relationships, violence may be directed against women (Tappis et al., 2012).

Family functioning was poor among the victims and participants whose violence had continued. Previous studies have shown that the family structure, organisation, resources, stability, and relationships between family members have a significant effect on family members' levels of stress, their management of conflicts, and the frequency of their violent interactions (Kang, 2012).

In addition, women reported worse family functioning than men. According to a previous study, negative family dynamics and dysfunctional parental partner dynamics increased the likelihood of FV (Tucker et al., 2014). Negative family dynamics and the experience of violence during adolescence have been strongly linked to parental conflict and sibling victimisation (Deane et al., 2016; Tucker et al., 2014). The parent-child relationship was influential in later parenting behavior. According to Rodriguez & Tucker (2011), poor attachment predicted both dysfunctional parenting practices and elevated potential for perpetrating child abuse. The parent-child relationship may exert lifelong influence on later parenting practices. Alternatively, a positive attachment may develop and end the violence (Rodriguez & Tucker, 2011).

Family health varied. In the baseline study, participants with experiences of FV, especially the perpetrators, had worse family health than participants with no experience of violence. Unexpectedly, the victims experienced worse health than the

perpetrators in the follow-up study, contrasting with the results of previous studies in which perpetration was associated with negative health outcomes (Hellmuth et al., 2013). One previous study clearly showed the interrelationship between being a victim of violence and experiencing poor health (Krug et al., 2002). In general, FV exposure as an adult is associated with a lower physical and mental health status (Paranjape et al., 2009; Svavarsdottir & Orlygsdottir, 2008; Örmon et al., 2015). Shorey et al. (2012) found that greater mental health problems were associated with a higher frequency of violence perpetration. In addition, being either a victim or a perpetrator was negatively associated with health-related quality of life (Costa et al., 2015).

Significant differences in health were not found between genders, although health seemed to be slightly poorer among women. In addition, violence causes poor health outcomes, especially for women (Krug et al., 2002; Sillito, 2012). Women were at increased risk of physical and mental health symptoms, and men were at increased risk primarily for mental health symptoms (Djikanovic et al., 2013).

Social support was found to be worse for the victims and participants who continued to experience violence. Women reported worse social support than men. Earlier studies indicated that victims experienced difficulties when accessing healthcare services, including inappropriate responses, discomfort with the healthcare environment, and a lack of confidence (Prosman et al., 2014; Robinson & Spilsbury, 2008). Health services play an important role in providing victims with necessary treatment and care. Therefore, health services must provide a place where patients can feel safe and receive quality, informed support (García-Moreno et al., 2005). The care of patients requires multidisciplinary collaboration and professionals who have the required knowledge, skills, and commitment to identify and intervene in cases of FV (Leppäkoski & Paavilainen, 2013; Leppäkoski et al., 2015). Lack of privacy, problems with continuity of care, and time constraints are barriers to patients being able to discuss violence. Patients are better able to disclose FV in safe environments, and women prefer to discuss issues of violence with other women or experts who are their age or older (Damra et al., 2015).

### 6.1.3 Documentation and care of family violence patients in healthcare

Various patients in different healthcare settings can have a family violence background. The ICD-10 coding should be used to help victims, healthcare professionals, and researchers in the detection, treatment, and prevention of family

violence. However, the coding was insufficient because only 34 (3%) visits were coded with a proper perpetrator code. In addition, the coding didn't match because in the baseline study, over half (55%) of the patients' hospital visits were not caused by a spouse or a partner in spite of the perpetrator coding. The amount of perpetrator codes had decreased, even though the general number of the Assault and Physical violence coded visits had increased. According to WHO (2013) guidelines, the minimum requirements for asking about partner violence are a protocol/standard operating procedure, training on how to ask, a minimum response or beyond, a private setting, ensured confidentiality, and an in-place referral system.

Overall, 145 FV patients were identified in the medical records. As shown in the previous studies, only a small percentage of victims report this kind of violence (García-Moreno et al., 2005; Oosterlee et al., 2009). Men and women are most likely to seek support for violence from family and friends rather than from institutions or organisations. Help is increasingly being sought for more serious and more common violence. Victims who experience severe forms of FV are more likely to seek help. (Ergöçmen et al., 2013; Kim & Hogge, 2015; Morgan et al., 2014.)

The rates of hospitalisation were much higher for women than for men. Only 10 male victims reported FV. A previous study has shown that male victims seek help at lower rates and their age is usually 40 or above (Choi et al., 2015). Although men were more likely to initiate physical contact and use physical force, women had higher levels of physical and psychological aggression compared to men. Couples with FV arrests had elevated levels of physical and psychological aggression by both partners compared with couples that were not involved in an arrest incident (Capaldi et al., 2009). The number of male victims may be larger because men tend to underreport and hide this kind of victimisation, and also because their injuries are usually mild (Carmo et al., 2011; de Macedo Bernardino et al., 2016). Male victims may be reluctant to report violence for fear of being rejected, humiliated, and ridiculed by healthcare professionals (Barber, 2008; Kumar, 2012). In particular, men do not trust professionals and avoid asking for help because they feel that they are being blamed and labelled by professionals (Flinck et al., 2008).

The majority of patients received radiologic testing, wound care, and pain medications as in a previous study (Btoush et al., 2009). Most of the photographs of the injuries were taken by the nurses, but also by the police. However, photographs were not always taken, and the patient guidelines for violence were distributed only to one patient. According to Deutsch et al. (2017), victims were rarely asked about



injuries unless they were immediately visible. Photographs are important for all victims seeking legal remedy (Deutsch et al., 2017).

The care of patients requires social and healthcare professionals' cooperation, and they need to follow written principles and common procedures. The professionals need the appropriate knowledge and skills to identify and intervene in FV, and this requires a commitment to training from the workers, their superiors, and the trustees. (Leppäkoski & Paavilainen, 2013; Leppäkoski et al., 2015). Family nursing principles and interventions should be applied to the care of the victims because violence affects the whole family, and the role of the family is central to the health and well-being of individuals. Family nursing is centred on the care of the entire family as a unit (Sittner et al., 2007). Nurses need to work closely with the family to discover their strengths and resources. Understanding families' strengths and resources enables nurses to build a connection with the family and tailor supportive interventions (Coyne et al., 2017). Family strengths promote strong and healthy relationships in different situations. Nurses can help families define their visions and hopes for the future instead of looking at negative factors which can lead to problems. (Sittner et al., 2007.)

#### 6.1.4 Violence in the society

The perpetrator codes underestimate the statistics on FV, as a major percentage of the X85-Y09 and the T74.1 coded visits included only the essential code of the injury, but lacked the additional perpetrator code. Hence, these visits are not visible as FV in statistics. Documentation and proper coding has been proven insufficient in previous studies (Btoush et al., 2009; Schafer et al., 2008). According to Lunetta et al. (2008), almost every fourth (23%) patient visit with an injury code lacked the external cause of injury code.

To improve the standard of assessment and documentation, training and the use of a purpose-designed FV intervention form that contains risk assessment questions with a body map could make a difference (Ritchie et al., 2013). Globally, accurate, clear, and comprehensive documentation increases the detection of FV (Biroscak et al., 2006; Btoush et al., 2009; Schafer et al., 2008). In addition, the recognition of the effects caused by violence permits better care to improve the patients' health and quality of life (Btoush et al., 2009). Unrecognised violence increases the risk of human suffering, serious injury, or fatal death, as well as the healthcare burden, significantly (Notko et al., 2011). According to the hospital database, FV comprises

only a small number of the patients who have experienced violence. The diagnosis codes cover only hospitalised patients, who constitute only the tip of the iceberg of victims of violence. (O'Donnell et al., 2009; O'Donnell et al., 2010.)

Victim care results in high expenses to society because of the presence of multiple diagnoses and hospital admissions, especially with regard to on-call times, operations, follow-ups, and sick leaves. Most of the patients stayed in the hospital for one to three days and were then discharged home with follow-up as in a previous study (Chan et al., 2013). In addition, some patients had previous hospital visits and follow-ups caused by previous violence. More than half of the patients whose hospital visits lasted one week or more in the FAFHES study had experiences of violence. Previous studies have shown that patients with violent experiences have more hospital visits than patients without violent experiences (Leppäkoski & Paavilainen, 2013; Notko et al., 2011). Moreover, for patients with violent experiences, the average duration of hospital care is longer, and medical treatment expenses are higher than for patients with no violent experiences. In addition, the former are diagnosed with several diagnoses (Kothari & Rhodes, 2006). Violence was also experienced during pregnancy. According to Almeida et al. (2017), violence during pregnancy was associated with greater odds of physical child maltreatment, which underscores the importance of screening pregnant women to prevent violence at an early stage (Chan et al., 2012). In fact, FV causes a multitude of expenses to society, of which the healthcare expenses are not the most significant. In Finland, the expenses of violence against women were calculated in 1998. In total, healthcare costs were 6.7 million euros, social care costs were 14.8 million euros, and justice system costs were 26.6 million euros. (Piispa & Heiskanen, 2000.)

## 6.2 Ethical considerations

The ethical considerations were taken into account throughout the study process to ensure the study is acceptable and reliable, and that its results are credible (Varantola et al., 2012). Research ethics form the foundation of the scientific field were essential, especially with sensitive research topics such as FV. The major ethical aspects of the study related to protecting participants' privacy and confidentiality. However, the overall goal of the study was to increase knowledge to improve the care of the FV patients and the continuation of the research (Paavilainen et al., 2014). In addition, the principles of research ethics include justice, respect for human rights, integrity, confidence and respect while avoiding harm (Kylmä & Juvakka, 2007: 147).

The study was based on and carried out using the guidelines of the Declaration of Helsinki, Finnish National Board on Research Integrity (TENK), and The National Advisory Board on Social Welfare and Health Care Ethics (ETENE) regarding responsible research conduct (Declaration of Helsinki, 2014; ETENE, 2011; Varantola et al., 2012). The research was done carefully, precisely, and honestly, taking into account the research ethics throughout the whole process. All original publications and supporting sources, as well as authors, were acknowledged properly with citations (Kankkunen & Vehviläinen-Julkunen, 2009: 172.) The publications used for the study were searched for in the main and official databases used at Tampere University, and mainly only peer-reviewed publications were selected.

Research permit standards were carefully consulted to conduct this study, and the permit standards were carefully followed. The registry based data part of the study was approved by the medical director of the hospital district (70/2.5.2012, 92/4.6.2012, n § 175). The hospital's ethical committee or National Institute for Health (THL) and welfare permissions were not necessary because the data consisted of only one healthcare district's hospital database and the patients were not contacted (STM, 2012; Tays, 2017.) Therefore, approval from a research ethics committee was not obtained. However, the topic is sensitive and therefore, the approval of the ethics committee would have strengthened the ethics of this study.

The patients' electronic medical records data were collected from the same hospital. Hence, the data stayed in one place and was protected by the use of a password on the computer. All the personal information included in the medical records (name, social security number, address) was deleted to protect the anonymity of the participants. Moreover, the data was possible to analyse without the personal information and no scientific arguments existed to maintain the information. After the study, the data will be destroyed because of the sensitivity of the topic. In addition, the participants' permission was not sought to retain the data (TENK, 2019).

In the FAFHES questionnaire part of the study, permission to use the FAFHES instrument was obtained from the copyright holders of the instruments by the researcher (Leppäkoski) and the leader of the research group (Paavilainen). In addition, the study was approved by the medical director of the hospital district, and a statement of ethical approval was requested and granted for the study from the ethical committee of the hospital district (the Pirkanmaa Hospital District Ethical Committee, ETL R12057H). The ethical considerations related to the use of the FAFHES questionnaire were focused on the information used in the research, voluntary participation, and written consent forms. It was crucial that the

participation was truly voluntary, though the patients might have felt the participation was obligatory because of the care they received (Kankkunen & Vehviläinen-Julkunen, 2009: 177.) In human sciences, it is essential that participants truly understand what they have agreed in the research, as well as to ensure the agreement. In addition, the participants must be informed who is responsible for the study and have the ability to contact the researchers. (Kuula, 2011: 104-105.)

In the baseline FAFHES questionnaire study, the hospital units, as well as all the participants, were informed about the study by the researchers (Paavilainen et al., 2014). Each unit separately determined the correct time and number of the shared questionnaires. The researchers had no direct participation with the participants and the nurses recruited the participants. The participants were given the option to fill out the questionnaire after their outpatient clinic appointments or before being discharged from the ward. It was also possible for the participants to take the questionnaire home and return it by mail. The introductions of the questionnaires contained information regarding the topic and aims of the study, the benefits and potential risks, the assurance of anonymity and confidentiality, the handling and archiving of the data, and the voluntary nature of participation, as well as an option to withdraw from the study at any time. Written informed consent was received from all participants, as part of the questionnaire (Leppäkoski & Paavilainen, 2015; Stark & Hedgecoe, 2010).

The follow-up questionnaires were sent by post to all the participants in the baseline study who gave permission to be included in the follow-up study. In both studies, the introduction included information about the study and the contact information of the researchers. Participation did not harm the participants, but filling out the questionnaire required some effort. Both data sets were analysed without any personal information on the participants. Every participant was given a specific code which was maintained separately from the personal information. Both the codes and written data of FAFHES questionnaires were stored in a locked place during the process. After the study, all the information of the questionnaires will be filed without the personal information in the data archive of Social Sciences at the Tampere University.

The study design, methods, instruments, ethical considerations, funding, and the researchers' affiliations are accurately documented in the text and articles I–IV. In addition, the results were reported following the guidelines regarding authorship of the articles. All data were handled with confidentiality, and participants' safety and anonymity was ensured (Paavilainen et al., 2014). Only personal data which were necessary for the purpose of the research were processed (Chassang, 2017). The data

were protected to ensure privacy and confidentiality. The integrity and accuracy of the ethical guidelines were taken into account in reporting the results, while protecting the anonymity of the participants (Kylmä & Juvakka, 2007: 154). The results were reported at a group level to avoid the recognition of an individual participant. The names of the hospital district or the hospital were not mentioned.

## 6.3 Strengths and limitations of the study: Validity and reliability

### 6.3.1 Strengths of the study

To strengthen the study, the credibility and reliability of the analysis were validated with the face validity and mixed methods. Combining different data and methods enabled to describe the phenomenon from a wider and more versatile perspective. The reliability of the register based data was associated with the whole process, in which case the utilised methods and the analysis were described as clearly as possible using different figures and tables. The reliability and conceptualisation were insured by returning several times to the original text, so that the creation of sub- and upper categories would be as logical as possible. (Kylmä & Juvakka, 2007: 128–129.) In the questionnaires part of the study, all the statistical tests were conducted in cooperation with the biostatistician, who also reviewed the tests and the results.

The FAFHES questionnaire has been used and developed with different patient groups. The reliability and internal consistency of the instrument has proven to have a high Cronbach's alpha ( $> 0.60$ ) in previous studies (Leppäkoski & Paavilainen, 2015; Åstedt-Kurki et al., 2009). However, the reliability was assessed after modifications were made in the baseline study, and again in the follow-up study. The alpha values are presented in Table 20.

**Table 20.** The Reliability and Internal Consistency of the FAFHES Questionnaire

The Domain	Cronbach's Alpha 2012–2013	Cronbach's Alpha 2015
Family functioning	0.957	0.956
Family health	0.830	0.846
Social support	0.951	0.934

The values were considered to indicate an acceptable level of reliability (Hinton, 2014). In addition, the questionnaire was pretested with 27 participants after the modification was made in different units. The questionnaire was not changed after the pretest (Leppäkoski & Paavilainen, 2015).

Moreover, the construct validity of the questionnaire was assessed by factor analysis (principal component analysis with varimax rotation) in previous studies. Each of the three domain scores (family functioning, family health, social support) and their subscales (Table 5) supported the theoretical model of family functioning, family health, and social support. In addition, the domain scores had acceptable reliability (alpha coefficients ranged from 0.73 to 0.98.) (Åstedt-Kurki et al., 2002; Åstedt-Kurki et al., 2009). The questionnaire has also been translated from Finnish into Danish. To test the validity and reliability of the Danish version, the domain scores were reconstructed using confirmatory factor analysis. In all three modified scores, the construct validity was supported by the analysis. Moreover, strong correlations were found within the factors, with Cronbach's alpha ranging from 0.73 to 0.95. (Østergaard et al., 2017.) In conclusion, the FAFHES instrument is a reliable tool with regard to construct validity and internal consistency (Åstedt-Kurki et al., 2009).

### 6.3.2 Limitations of the study

This study has several limitations. First, both the registry based and questionnaire parts' findings have restrictions in terms of their generalizability. All the participants represented patients from a single-district central hospital in Finland and most of the participants were women. It is also possible that some of the FAFHES participants were also part of the registry based data, if they were hospitalised FV victims during the FAFHES study period.

Second, violence is still a very sensitive issue, and the results can be affected by denial or participants' desire to provide socially acceptable responses. In the registry based data, some patients may have stated a false reason for their injuries, such as reporting an accident instead of violence in seeking healthcare. In the questionnaires data, the FAFHES questionnaire included only physical and emotional violence. These forms of violence were combined and their contents were not defined.

Third, the FAFHES questionnaires data had a small sample. The participation rate was comparatively low, which can result in selection bias if the sample does not accurately represent the population. To avoid this bias, different hospital units and

wards were selected to participate in the study. The importance of the study and insured anonymity were described to participants in the introduction of the questionnaire. In addition, the selection process was truly random, and every patient or family member had an opportunity to participate. To comprehensively avoid selection bias, the sample also has to adequately represent the original data and the research reality (Leino-Kilpi & Välimäki, 2014: 70). In the baseline FAFHES questionnaire study, the participants' characteristics were compared to those of all the participants (Table 8). The characteristics were similar to each other; hence, selection bias was not considered a serious problem. Moreover, the follow-up questionnaires were sent to every participant who had agreed to participate in the baseline study without criteria for inclusion. However, the response rates remained quite low in both studies.

Finally, violent experiences are different, and this study might not accurately portray the prevalence of FV among hospital patients. We may have failed to measure some factors that are important for identifying FV, and we may have missed some characteristics in our data extraction.

## 6.4 Importance of the study

The study increases knowledge about the diverse and complex factors associated with FV for the healthcare professionals. Furthermore, the study points to the importance of ensuring the overall well-being of FV victims or perpetrators and their families in healthcare. A lack of general preparedness concerning the identification of FV and the care provided for victims may mean many patients do not receive appropriate care and treatment.

Theoretical knowledge can offer a better understanding for the healthcare professionals, of the complexity of FV and its associations at various levels, including the personal, family, healthcare, and societal levels. This new information is needed for the development of FV patient care. Theoretical knowledge forms the basis of the profession and guides nurses' practice (Fawcett, 2005; Reed & Shearer, 2011: 3–4, 27). This knowledge provides a framework to explain phenomena at both an abstract and concrete level (Fawcett, 2005; McCarthy & Fitzpatrick, 2014: 15, 26.) Moreover, theoretical knowledge provides perspective, specificity to inform action, distinction, and clarity on nursing identity (Karnick, 2016; Reed & Shearer, 2011: 3–4).



The findings of this study offer knowledge to implement guidelines and screening tools to enhance FV identification, documentation, and victim care in healthcare. The findings should also encourage legal, and social service professionals to better identify and focus more broadly on the overall physical and mental well-being of FV patients and their families.

## 6.5 Conclusions

Altogether, various patients in different healthcare settings can have an FV background and healthcare professionals are on the front line to identify and intervene in FV. The professionals can alleviate feelings of shame, fear, and isolation by creating a supportive and non-judgemental environment that is free of prejudice and preconceptions. This process requires the proper information and skills, and the development of policies and procedures.

The following conclusions can be drawn from the results of this study:

1. There is a great need to improve the documentation and coding of FV in healthcare. The poor use of the proper perpetrator codes underestimates the incidence of violence, and minimises the codes' usefulness for statistics and surveillance.
2. Healthcare professionals should pay attention to the overall health and well-being of FV patients or perpetrators' families.
3. Multidisciplinary collaboration between health, legal, and social service professionals is needed to provide comprehensive care.

Careful documentation of FV improves the visibility of the problem and its impact on the victims, families, and communities. The identification of FV and the well-being of families require a careful negotiation of the prerequisites and the courage to ask about and suspect the possibility of violence. With the identification of FV and close multidisciplinary collaboration, violence reduction and injury prevention can be significantly improved. Thus, the well-being of individuals, families, and society can be enhanced.



## 6.6 Implications for future studies

This study offers several implications for further research. Healthcare professionals need to be sensitive to FV patients. More research is needed to determine effective methods to improve the identification, documentation, and proper coding of victims. Findings from a single country are not necessarily generalizable to other countries. Thus, more comprehensive studies on victimisation and perpetration are needed within and across a wide range of countries, including the determination of which factors apply universally and which are culturally specific to FV.

In addition, future research should also seek to recognise cultural differences between and within ethnic groups in terms of family functioning, health, and social support in Finland. More concentrated and culturally sensitive research can lead to a clearer understanding of the scope and causes of FV, which in turn may lead to more effective preventive and intervention efforts.

More quantitative and qualitative research examining family dynamics in FV would lead to a greater in-depth understanding of this phenomenon. Qualitative studies would also be helpful to deeply clarify how the risks and protective factors of violence interact. The results of this study showed the need for more research about documented care for victims of violence. Additional research is needed to assess the usefulness of coding and content in clinical practice. Furthermore, research into victim or family perspectives on the care offered at the hospital could shed even more light on areas for improvement. The evolving nature of FV requires longitudinal studies, which are fundamental for examining the interaction of individual and family variables.



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## PUBLICATIONS I–IV



# PUBLICATION I

## **Miten parisuhdeväkivalta näyttäytyy terveydenhuollossa**

Kivelä S, Leppäkoski T, Kälvinmäki J, Ruohoniemi J, Puolijoki H & Paavilainen E

Sosiaalilääketieteellinen aikakauslehti 53, 98-107

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# Miten parisuhdeväkivalta näyttäytyy terveydenhuollossa

Parisuhdeväkivallan aiheuttamien vammojen tutkimus on tehtävä huolellisesti ja kaikki löydökset on dokumentoitava. Tutkimuksessa kuvataan puolison tai partnerin tekemää väkivaltaa, annettua hoitoa sekä kirjaamista terveydenhuollossa.

Aineisto (N=606) kerättiin erään sairaanhoitopiirin sähköisestä potilasrekisteristä.

Väkivaltatapaukset saatiin ICD-10 luokituksen lisäkoodien X85-Y09 avulla vuosina 2008–2011 ja päädiagnoosin T74.1 fyysinen pahoinpitely avulla vuosina 2008–2012. Aineisto analysoitiin sisällön analyysillä.

Puoliso tai partneri oli väkivallan tekijänä 53 potilastapauksessa. Enemmistössä aineiston tapauksia uhri oli nuori nainen, tapahtuma-aikana yö ja väkivaltaan liittyi alkoholi. Väkivallan dokumentointi osoittautui puutteelliseksi, koska annetuista lisäkoodeista yli puolet ei vastannut potilaskertomusten sisältöä ja valtaosa T74.1 käynneistä oli merkitty ainoastaan varsinaisen päädiagnoosin mukaan.

**SALLA KIVELÄ, TUIJA LEPPÄKOSKI, JOONAS KÄLVINMÄKI, JANNE RUOHONIEMI,  
HANNU PUOLIJOKI, EIJA PAAVILAINEN**

## TUTKIMUKSEN TAUSTA

Perheväkivalta aiheuttaa inhimillisiä kärsimyksiä perheen sisällä ja ulkopuolella sekä kuormittaa terveydenhuollon palvelujärjestelmää (1). Parisuhteessa, perheessä ja muissa läheisissä ihmis-suhteissa on kautta aikojen esiintynyt fyysistä ja henkistä väkivaltaa sekä alistamista. Väkivalta on usein piilotettua ja kotona tapahtuvaa, jolloin sen tunnistaminen on vaikeaa ja puuttumiskeinot vähäiset. (2, 3.) Fyysisten vammojen lisäksi perheväkivalta vaarantaa väkivaltaa kokeneiden lasten, vanhempien tai puolisoitten psyykkistä terveyttä, lisää kuolemanvaaraa, kasvattaa terveyseroja ja edistää ihmisten syrjäytymistä ja eriarvoisuutta (2). Raskaudenaikainen väkivalta vaarantaa myös sikiön hyvinvointia ja kehitystä suurentamalla riskiä keskenmenoihin, myöhäiseen äitiyshuollon asiakkaaksi tulemiseen, lapsen syntymiseen kuoleena, ennenaikainen synnytykseen sekä sikiövaurioihin ja alhaiseen syntymäpainoon (2, 4, 5).

Kaikesta Suomessa poliisiin tietoon tulleesta väkivallasta vuonna 2007 perheväkivallan osuus oli 12 %. Parisuhteessa tapahtuneita pahoinpitelyjä sekä henkirikoksen yrityksiä oli yhteensä 2741, joista 2363 (86 %) kohdistui naisiin ja 378

(14 %) miehiin. (6.) Parisuhdeväkivalta on yksi perheväkivallan muodoista, jossa väkivallan tekijänä on puoliso tai partneri. Viimeisimmän kansallisen rikosuhritutkimuksen mukaan naiset kokevat lievää väkivaltaa tai uhkailua nykyisen tai entisen kumppanin taholta enemmän kuin miehet, mutta vakavaluontoisemmassa fyysisessä väkivallassa ei ole kuitenkaan eroa miesten ja naisten välillä. (7.) Vain osa rikoksista tulee poliisiin tietoon. Danielssonin ja Salmen (8) tutkimuksessa naisiin kohdistuneista parisuhdeväkivaltatapauksista vain 10 % ja miehiin kohdistuneista 3 % tuli poliisiin tietoon. Fyysistä väkivaltaa kokeneista naisista 17 % oli hakeutunut terveydenhuoltoon vammojensa takia, mutta miehistä ei kukaan.

Naisuhritutkimukset osoittavat, että 15 vuotta täyttäneistä naisista noin 20 % on kokenut nykyisessä parisuhteessaan fyysistä väkivaltaa ainakin kerran (9, 10). Niemisen ym. (11) tutkimuksessa nuorista 18–20-vuotiaista miehistä 17 % oli joutunut kumppaninsa lyönnin kohteeksi. Viimeisimmän valtakunnallisen survey-tutkimuksen (N=3201) mukaan naiset ja miehet olivat kokeneet lähes yhtä paljon väkivaltaa tai sen uhkaa

kumppaniensa taholta. Noin 16 % heistä oli kokenut sitä vähintään kerran parisuhteessaan. (12.)

Viime aikoina on alettu kiinnittämään huomiota väkivallan monimuotoisuuteen, eri sukupuolten rooliin tekijöinä ja kohteina sekä samaa sukupuolta olevien parisuhteessa esiintyvään väkivaltaan (13, 14). Väkivaltaa kokeneet käyttävät enemmän terveydenhuollon palveluita kuin muu väestö, jolloin terveydenhuollon ammattilaiset ovat avainasemassa parisuhde- ja muun perheväkivallan tunnistamisessa ja siihen puuttumisessa (14, 15). Hoitojaksot ovat pidempiä ja hoitokulut suurempia kuin muilla potilailla keskimäärin ja heillä on useita eri diagnooseja (16, 17). Väkivalta on kliininen ja emotionaalinen haaste kaikille terveydenhuollon ammattilaisille, jotka työssään tapaavat, tutkivat ja hoitavat parisuhdeväkivallan uhreja. Ohjeiden ja potilaan taustatietojen puute, potilaiden kokemaa häpeää ja toimipaikan epäyhtenäiset käytännöt sekä kiire, asian arkaluontoisuus ja levoton työympäristö vaikeuttavat väkivallan tunnistamista ja siihen puuttumista. (15, 18.) Husson ym. (19) tutkimuksen mukaan näyttää siltä, että terveydenhuoltohenkilöstöllä on taipumus kiinnittää huomio väkivallan aiheuttamiin vammoihin ja seurauksiin, mutta samalla ohitetaan väkivallan syyt ja taustat.

Kansainvälisten tutkimusten (20, 21) ja kansallisten suositusten mukaan parisuhdeväkivallan kirjaamista terveydenhuollossa tulee kehittää, koska siten voidaan todentaa vammojen olemassaolo ja taustat (22, 23). WHO:n suositusten mukaan terveydenhuoltohenkilöstön tulisi saada koulutusta parisuhdeväkivallan kirjaamisesta (24). Väkivallan vaikutusten tunnistaminen mahdollistaa paremman hoidon uhrien terveyden ja elämänlaadun parantamiseksi (21). Pelkästään fyysisten vammojen hoitaminen ei riitä vaan lisäksi tarvitaan panostusta ja kehittämistä väkivallan tunnistamiseksi ja siihen puuttumiseen, koska tunnistamisen dokumentointi ja diagnoosointi ovat puutteellisia (25, 26). Yhtenäistä dokumentointikäytäntöä ei ole, mutta suositusten mukaan EU:n jäsenvaltioissa tulisi terveydenhuollossa kerätä tiedot ja kirjata jollain tavalla parisuhdeväkivallasta vähintään uhrin ikä ja sukupuoli, tekijän ikä ja sukupuoli, uhrin ja tekijän välinen suhde sekä väkivallan muoto. (22). Vammojen ja oireiden puutteellinen ja epäyhtenäinen dokumentointi heikentävät valtakunnallisten ja kansainvälisten tilastojen luotettavuutta ja käytökelpoisuutta (27) sekä vaikeuttavat hoidon seuranta ja kehittämistä.

ICD-10 Tautiluokitus on kansainvälinen, maailman terveysjärjestön (WHO) ylläpitämä kuolemansyitä, sairauksia, tapaturmia ja terveyspalveluiden käytön syitä kuvaava luokitus, jota sosiaali- ja terveysministeriö velvoittaa käyttämään potilasta koskeissa asiakirjoissa. ICD-10 jakautuu aakkosten mukaisiin luokkiin ja numeroituihin alaluokkiin. Luokkia käytetään diagnooseina erilaisista sairauksista ja vammoista. Katsomalla järjestelmästä tiettyjä diagnoosikoodia, saadaan tietoa väkivaltaa kohdanneiden potilaiden vammoista, mutta myös väkivallan tekijästä, ja tekotavasta. Varsinainen diagnoosi, joka ilmoittaa väkivallan aiheuttaman vamman on useimmiten luvusta XIX Vammat, myrkytykset ja eräät muut ulkoisten syiden aiheuttamat seuraukset (S00-T98). Luvun XX Vammojen, sairauksien ja kuoleman ulkoiset syyt (V01-Y98) diagnoosit ovat lisäkoodeja, jotka ilmaisevat ulkoisia syitä eivätkä niiden aiheuttamia vaurioita. Tähän lukuun kuuluu ryhmä X85-Y09 Murha, tappo tai muu pahoinpitely, jonka diagnoosikoodien avulla voidaan merkitä väkivallan tekijä ja tekotapa. Tekijäksi voidaan koodien avulla merkitä puoliso tai partneri, vanhemmat, uhrin lapsi, tuttava tai ystävä, muu tai tuntematon suorittaja. Tapaturmat on rekisteröitävä sekä luvun XIX että luvun XX mukaan. (28, 29). ICD-10 diagnoosikoodia tarkastelemalla saadaan tietoa parisuhdeväkivallan toiminta- ja kirjaamiskäytännöistä sekä terveydenhuollossa tunnistetusta väkivallasta ja avun tarpeesta. Tietoa voidaan hyödyntää kehitettäessä väkivaltatyön interventioita ja kirjaamiskäytäntöjä.

## TUTKIMUKSEN TARKOITUS JA TUTKIMUSONGELMAT

Tämän tutkimuksen tarkoituksena oli kuvata parisuhdeväkivaltatilanteita, joissa väkivallan suorittajana on puoliso tai partneri terveydenhuollon sähköisten käyntitietojen ja potilaskertomusten avulla. Tavoitteena oli saada tietoa väkivaltatilanteista ja aiheutuneista vammoista, joiden avulla voidaan parantaa parisuhdeväkivaltaa kokeneiden potilaiden tunnistamista terveydenhuollossa. Toisena tavoitteena oli kehittää parisuhdeväkivallan kirjaamista tarkastelemalla tekijän ja tekotavan merkitsemiskäytäntöjä ICD-10 Tautiluokituksen lisäkoodien avulla. Tarkoituksena oli keskittyä vain parisuhdeväkivaltaan, mutta kirjaamisen vaihtelevuus ja osittain epäselvyys toi tarkasteluun myös muitakin väkivaltatilanteita.

## TUTKIMUSONGELMAT

1. Miten parisuhdeväkivalta kirjataan tekijän ja tekotavan mukaan sairaanhoitopiirin tilastojen valossa vuosina 2008–2012?
2. Millaista sairaalassa ilmituleva parisuhdeväkivalta on luonteeltaan (väkivallan tekijät, teko-tapa, potilaiden vammat, sukupuoli ja ikä)?
3. Mitä parisuhdeväkivaltaa kokeneiden hoito sisältää terveydenhuollossa?

## TUTKIMUSAINEISTO JA MENETELMÄT

Tutkimusaineisto (N=606) muodostui kahdesta eri osa-aineistosta, jotka poimittiin erään sairaanhoitopiiriin käyntitiedoista. Aineisto 1 muodostui lisäkoodien avulla (X85-Y09) merkityistä käyntitiedoista ja aineisto 2 päädiagnoosin T74.1 käyntitiedoista. Aineistoista tutkittiin edellä mainittujen ICD-10 diagnoosikoodien käyttöä tilanteissa, joissa väkivallan teon suorittajana oli puoliso tai partneri.

Aineistosta 1 vuosina 2008–2011, ryhmään X85-Y09 kuuluvia diagnooseja oli kirjautunut yhteensä 304 potilaalle (Taulukko 1). Tässä aineistossa puoliso tai partneri oli kirjattu väkivallan suorittajaksi 22 (7 %) potilaan kohdalla (Taulukko 2). Potilaskertomuksista kävi ilmi, että todellisuudessa ainoastaan kymmenen potilasta olivat kohdanneet parisuhdeväkivaltaa. Aineiston 1 ollessa pieni kerättiin sen lisäksi aineisto 2, jota tutkimuskysymyksiin pystyttiin vastaamaan.

Aineistossa 2 päädiagnoosin T74.1 (Fyysinen pahoinpitely), käyntitietoja oli kirjautunut vuosina 2008–2012 yhteensä 302. Tämä diagnoosikoodi ei erottele väkivallan tekijää, joten ainoa mahdollisuus oli potilaskertomuksiin perehtyminen. Potilaskertomuksista kävi ilmi, että puoliso tai partneri osoittautui väkivallan teon suorittajaksi 46 (15 %) potilaan kohdalla (Taulukot 1 ja 2). Näistä potilaista kolme oli samoja mitä ensimmäisessä aineistossa, koska heille oli lisäksi merkattu tekijää ja tekotapaa ilmaiseva ulkoisen syyn diagnoosinumero ryhmästä X85-Y09. Lopullisen tutkimusaineiston muodosti 53 potilaan

aineisto (10 + 43), joissa puoliso tai partneri osoittautui väkivallan tekijäksi.

Potilaskäyntien sisältöön ja väkivallan piirteisiin perehdyttiin potilaskertomusten avulla. Käynteihin sisältyivät sekä päivystys- että vuodeosastohoitokäynnit. Tutkimusaineisto analysoitiin määrällisesti laskemalla eri käyntien ja potilaiden tunnuslukuja ja potilaskertomukset analysoitiin käyttäen laadullista sisällön analyysiä. Potilaskertomusten teksteistä haettiin systemaattisesti uhrin ja tekijän sukupuolta ja ikää sekä suhdetta toisiinsa, väkivallan tapahtuma-aikaa, tekotapaa sekä aiheutuneita vammoja.

Tutkimuslupa saatiin sairaanhoitopiirin johtajaililääkäriltä (70/2.5.2012 ja 92/4.6.2012), kuten rekisteritutkimuksia koskeva lupakäytäntö edellyttää silloin kun tutkimus koskee yhtä sairaanhoitopiiriä. Lupa- ja lausuntokäytäntöä selvitettiin perusteellisesti sekä THL:n, alueen eettisen toimikunnan että rekisteritutkimuksen asiantuntijoilta ja sivustoilta. Potilastietoja käsiteltäessä kiinnitettiin huomiota erityisesti potilaiden anonymiteetin säilyttämiseen poistamalla aineistosta kaikki potilaiden tunnistamiseen mahdollistavat tiedot kuten henkilötunnukset ja paikkakunnat. (30, 31.) Lisäksi tulosten raportoinnissa kiinnitetään erityistä huomiota siihen ettei yksittäisiä tapauksia voida tunnistaa.

## TULOKSET

### PARISUHDEVÄKIVALLAN ESIINTYVYYS SAIRAANHOITAPIIRIN TILASTOISSA

Aineisto (N=606) muodostuu kahdesta eri aineistosta. Aineistossa 1 lisäkoodien avulla kirjattua parisuhdeväkivaltaa esiintyy sairaanhoitopiirin tilastojen valossa vuosina 2008–2011 yhteensä 22 potilastapauksessa. Aineisto 2, jossa tarkasteltiin varsinaisen päädiagnoosikoodin T74.1 kirjaamista nosti potilaiden määrän yhteensä 68 (Taulukko 1). Tarkempi potilaskertomuksiin tutustuminen osoittaa dokumentoinnin olevan kuitenkin puutteellista ja virheellistä. 68 potilastapauksesta puo-

### Taulukko 1.

Tutkimusaineisto

	2008	2009	2010	2011	2012	n
X85-Y09 Murha, tappo tai muu pahoinpitely (XX)	53	106	74	71	-	304
Tekijänä puoliso tai partneri	4	8	5	5		22
T74.1 Fyysinen pahoinpitely (XIX)	85	52	57	50	58	302
Tekijänä puoliso tai partneri	11	9	6	10	10	46
Yhteensä tekijänä puoliso tai partneri	15	17	11	15	10	68

liso tai partneri osoittautui väkivallan tekijäksi 53 potilaan kohdalla, joka muodosti analysoitavan aineiston.

Aineistossa 1 on lisäkoodein diagnosoituja potilaita yhteensä 304 vuosina 2008–2011, joista puoliso tai partneri on merkitty väkivallan tekijäksi 22 (7 %) potilaan kohdalla (Taulukko 2). Potilaskertomusten lähempi tarkastelu osoitti, että 11 potilaalla väkivallan aiheuttaja ei diagnoosista huolimatta ollut puoliso tai partneri. Lisäksi yksi käynti ei liittynyt lainkaan väkivaltaan, joten aineistossa 1 oli lopulta ainoastaan kymmenen potilasta, jotka olivat kohdanneet

puolison tai partnerin suorittamaa väkivaltaa. Diagnoosikoodeja, jotka osoittivat uhrin ja tekijän välisen suhteen, olivat X99.0 (Murha, tappo tai muu pahoinpitely terävän esineen avulla suorittajana puoliso tai partneri) (n = 1) ja Y04.0 (Murha, tappo tai muu pahoinpitely ilman aseita suorittajana puoliso tai partneri) (n = 9). (Taulukot 2 ja 3). Potilaista miehiä oli kaksi ja naisia kahdeksan.

Aineistossa 2 varsinaisen päädiagnoosin (T74.1 Fyysinen pahoinpitely) avulla merkittyjä käyntejä on yhteensä 302 vuosina 2008–2012. Osa käynneistä on väkivallasta aiheutuneiden en-

## Taulukko 2.

Väkivallan tekijä (X85-Y09 ja T74.1)

	2008	2009	2010	2011	2012	n	%
<b>X85-Y09</b>							
<b>Puoliso tai partneri</b>	4	8	5	5		22	7
Tuttava tai ystävä	2	1	3	7		13	4
Muu suorittaja	10	9	8	10		37	12
Tuntematon suorittaja	6	17	14	6		43	14
Suorittajaa ei merkitty	31	69	44	43		187	62
Vanhemmat	-	2	-	-		2	1
<b>Yhteensä</b>	53	106	74	71		304	100
<b>T74.1</b>							
<b>Puoliso tai partneri</b>	11	9	6	10	10	46	16
Tuttava tai ystävä	16	9	7	5	8	45	16
Muu suorittaja	4	2	2	2	2	10	4
Tuntematon suorittaja	38	15	29	20	19	122	43
Suorittajaa ei merkitty	9	9	6	9	17	50	17
Entinen puoliso tai kumppani	2	2	3	3	-	10	4
<b>Yhteensä</b>	80	46	53	49	56	284	100
<b>Yhteensä X85-Y09 ja T74.1</b>	133	152	127	120	56	588	

## Taulukko 3.

Puolison tai partnerin tekemä väkivalta X85-Y09

	ICD-10	Merkitty diagnoosikoodi	Potilasasiakirjoissa todettu tekijäksi puoliso tai partneri
Murha, tappo tai muu tahallinen pahoinpitely hirttämällä, kuristamalla tai tukehduttamalla suorittajana puoliso tai partneri	X91.0	1	
Murha, tappo tai muu tahallinen pahoinpitely ampumalla pistoolilla tai revolverilla, suorittajana puoliso tai partneri	X93.0	1	
<b>Murha, tappo tai muu tahallinen pahoinpitely terävän esineen avulla suorittajana puoliso tai partneri</b>	<b>X99.0</b>	<b>3</b>	<b>1</b>
Murha, tappo tai muu tahallinen pahoinpitely tylpän esineen avulla suorittajana puoliso tai partneri	Y00.0	1	
<b>Murha, tappo tai muu tahallinen pahoinpitely ilman aseita suorittajana puoliso tai partneri</b>	<b>Y04.0</b>	<b>14</b>	<b>9</b>
Lihaskäytön perustuva sukupuolinen väkivalta, suorittajana puoliso tai partneri	Y05.0	1	
Murha, tappo tai muu tahallinen pahoinpitely muilla määritetyillä tavoilla suorittajana puoliso tai partneri	Y08.0	1	
<b>Yhteensä</b>		<b>22</b>	<b>10</b>

sikäyntien jatkokontrollikäyntejä samoille potilaille, joten varsinaisia potilaita on yhteensä 284, joista miehiä 187 (66 %) ja naisia 97 (34 %). Potilaskertomusten lähempi tarkastelu osoitti että puoliso tai partneri oli mainittu väkivallan tekijäksi 46 potilaan kohdalla (16 %) (Taulukko 2), joista miehiä oli kaksi (4 %) ja naisia 44 (96 %). Potilaista kolme oli samoja mitä ensimmäisessä aineistossa, koska heille oli lisäksi merkattu tekijää ja tekotapaa ilmaiseva ulkoisen syyn diagnoosinumero ryhmästä X85-Y09.

Tapaturmat tulee rekisteröidä varsinaisen päädiagnoosin ja lisäkoodin avulla, mutta ainoastaan kolmelle (7 %) aineiston 2 potilasta oli merkitty päädiagnoosin lisäksi lisäkoodi. Lisäksi aineistojen (N=606) käynneistä 237 (40 %) kohdalla väkivallan tekijää ei ole mainittu lainkaan, jolloin tekijä sijoittuu ryhmään ”Suorittajaa ei merkitty”. 48 tapauksesta (8 %) tekijäksi on merkattu ”Muu suorittaja”, joka osoittautui aineistossa 2 useimmiten lähisukulaiseksi (vanhempi, sisarus tai oma lapsi) tai ravintolan vahtimestariksi.

#### SAIRAALASSA ILMITULEVAN PARISUHDEVÄKIVALLAN LUONNE

Aineistoista (N=606) puoliso tai partneri osoittautui väkivallan tekijäksi 53 (9 %) potilaan kohdalla. Väkivaltaa kokeneista potilaista 49 (92 %) oli naista ja 4 miestä (8 %). Yli puolet (53 %) väkivallasta tapahtuu alle 40-vuotiaille naisille ja useimmiten (70 %) yöaikaan (Taulukko 4). Naispotilaista kaksi oli raskaana väkivallan tapahtumahetkellä. Naisiin kohdistuneessa väkivallassa tekijäksi oli useimmiten kirjattu miespuolinen avo- tai aviopuoliso tai mies-/poikaystävä. Lisäk-

si yhdessä tapauksessa tekijänä oli oma tyttöystävä. Joka neljäs naispotilaista (27 %) mainitsi kokeneensa aikaisemmin puolison tai kumppanin aiheuttamaa väkivaltaa. Miehiin kohdistuneessa väkivallassa tekijänä oli kolmessa tapauksessa vaimo ja yhdessä oma poikaystävä. Miespotilaat olivat yhtä lukuun ottamatta yli 40-vuotiaita. Tekijän tai potilaan alkoholin käyttö oli mainittu joka viidennessä (23 %) potilaskertomuksessa.

Väkivallan tekotapoja oli käytetty useita. Yli puolessa (57 %) väkivaltatilanteessa tekijä oli käyttänyt useampaa kuin yhtä tekotapaa. Yleisimmät väkivallan tekotavat olivat lyöminen päähän tai kasvoihin (21 %), tarttuminen tai kiinni pitäminen (14 %), heitteleminen tai paiskominen (13 %), kuristaminen (11 %) sekä potkiminen vartaloon (10 %). Väkivallan aiheuttamista vammoista mainittiin selkeästi 21 potilaan (40 %) kohdalla. Eniten vammoja oli kasvojen ja pään alueella (40 %). Lähes neljäsosa (22,5 %) vammoista oli kipuja kasvojen tai pään alueella ja muuhun vartaloon kohdistuvia vammoja (22,5 %). Lisäksi oli kipua eri puolilla muuta vartaloa (15 %). Psykkisinä oireina mainittiin univaikkeudet ja painajaisunet sekä ahdistuneisuus ja pelko.

Aineiston 1 potilaskertomuksista pystyttiin analysoimaan myös potilaiden saamaa sairaalahoittoa. Vammojen hoidossa oli useimmiten tehty erilaisia radiologisia tutkimuksia, mitattu vitaalinelintoimintoja, otettu verikokeita sekä tehty haavahoitoja. Usein oli annettu myös kipulääkkeitä ja muutamalle aivotärähdyssurantaohjeet. Yhdessä tapauksessa vammakohdat oli kuvattu digitaalikameran avulla. Kymmenestä potilaasta neljä jäi sairaalahoittoon, joista kolmelle suoritet-

#### Taulukko 4.

Potilaiden ikä ja tapahtuma-aika (X85-Y09 ja T74.1)

Pahoinpidelty potilas	2008	2009	2010	2011	2012	n	%
<b>Potilas, mies</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>4</b>	<b>8</b>
Alle 40v miehet	-	-	1	-	-	1	2
Yli 40v miehet	2	-	-	1	-	3	6
<b>Potilas, nainen</b>	<b>12</b>	<b>10</b>	<b>5</b>	<b>12</b>	<b>10</b>	<b>49</b>	<b>92</b>
Alle 40v naiset	7	4	2	9	6	28	53
Yli 40v naiset	5	6	3	3	4	21	39
<b>Tapahtuma-aika</b>							
Aamu	-	-	-	3	1	4	8
Päivä	-	-	-	2	-	2	4
Ilta	-	2	-	2	2	6	10
Yö	11	8	6	5	7	37	70
Ei mainittu	3	-	-	1	-	4	8

tiin leikkaustoimenpide. Leikkaustoimenpiteitä vaativat rintakehän puukotusvammat sekä pään ja kasvojen alueen ja raajan murtumat. Lisäksi yksi potilas siirtyi terveystakesseurantaan.

Psykkisestä voinnista ja jaksamisesta oli maininta seitsemän potilaan kohdalla, joista viidessä oli tarjottu apua väkivaltilanteen selvittelyyn ja jaksamisen tukemiseen sairaalan erityistyöntekijöiden osaamisen avulla. Sairaalahoidon jälkeen kontrollikäyntejä erikoissairaanhoidossa oli kolmella potilaalla. Kontrollikäyntejä oli yhdestä kymmeneen ja yhden potilaan kohdalla oli jouduttu reoperaatioon kahdesti. Yhdelle potilaalle oli jäänyt väkivallasta pysyvä fyysinen vamma. Lisäksi kaksi potilasta hakeutui sairaalahoidon jälkeen uudelleen jatkohoitoon pahoinpitelystä seuranneen kivun ja psyykkisen oireilun takia.

## POHDINTA

Tutkimus osoittaa diagnoosien huolellisen dokumentoinnin olevan puutteellista parisuhdeväkivaltatapauksissa. Aineiston 1 lisäkoodien avulla merkityistä 22 potilaasta vain 10 osoittautui puolison tai partnerin tekemäksi väkivallaksi, koska 11 potilaan kohdalla tekijäksi osoittautui joku muu ja yksi käynti ei liittynyt lainkaan väkivaltaan. Aineisto 2 toi 46 parisuhdeväkivaltatapausta lisää, joista ainoastaan kolmelle oli varsinaisen päädiagnoosin lisäksi merkitty vaadittu lisäkoodi ilmentämään väkivallan tekijää, joten nämä käynnit löytyivät myös aineistosta 1. Jos puuttuvat lisäkoodit olisi merkitty 43 potilaan käynteihin, olisivat ne myös tilastoituneet puolison tai partnerin tekemäksi väkivallaksi potilasrekisteriin. Suomessa on tutkittu yleisesti ulkoisen syyn diagnoosinumeroiden käyttöä. Lunettan ym. tutkimuksessa (32) lähes joka neljästä (23 %) potilaskäynnistä, jonka päädiagnoosiksi oli merkitty jokin vammadiagnoosi, puuttui ulkoisen syyn diagnoosinumero. Parisuhdeväkivallan tunnistaminen vaatii huolellista esitietojen selvittämistä sekä rohkeutta kysyä ja epäillä väkivallan mahdollisuutta. Lisäkoodien merkitystä päädiagnoosien merkitsemisen lisäksi tulisi korostaa ja niiden merkitsemiseen panostaa, jotta parisuhdeväkivalta saataisiin nykyistä kattavammin tilastoitua terveydenhuollossa. Parisuhdeväkivallan näkyväksi tekeminen tilastojen avulla edesauttaa terveydenhuollon henkilökuntaa väkivallan tunnistamisessa, oikeaan syyhyn ja sen taustoihin puuttumista sekä väkivallan kierteen katkaisemisessa ja sen uusiutumisen ehkäisemisessä. Parisuhdeväkivallan piirissä elää lisäksi myös lapsia, joiden

hyvinvointiin tulee kiinnittää huomiota. Parisuhdeväkivallan näkeminen ja kuuleminen altistaa lapset epäsuoralle tai henkiselälle väkivallalle, joka vaarantaa heidän hyvinvointiaan ja terveyttään vähintään yhtä paljon kun muutkin väkivallan muodot. (33.)

Lisäkoodeissa on itsessäänkin puutteita. Niiden avulla tekijäksi voidaan merkata nykyinen puoliso tai kumppani, mutta entisten puolisoiden ja kumppaneiden aiheuttama väkivalta rajautuu aineistosta kokonaan pois, koska sille ei ole omaa koodia. Aineistossa 2 huomattiin nykyisen puolison tai partnerin aiheuttaman väkivallan lisäksi kymmenen potilasta, joiden kertomusteksteissä väkivallan tekijäksi oli kirjattu entinen puoliso tai kumppani. On myös mahdollista että puolison tai kumppanin tekemää väkivaltaa kirjautuu ”Suorittajaa ei merkitty” -ryhmään, koska väkivallan tekijää ei ole mainittu kaikissa käynneissä.

Tässä tutkimuksessa analysoitiin tapauksia yhden sairaanhoitopiiriin alueella, joten sen perusteella ei voida suoraan arvioida valtakunnallista tilannetta. Tutkimustulokset antavat aiheutta pohdittua asiaa myös valtakunnallisesti. Tiedetään kuitenkin, että diagnoosien asianmukainen dokumentointi on parisuhdeväkivaltaan liittyvissä potilastapauksissa puutteellista kansainvälisestikin (21). Täsmällinen, selkeä ja kattava dokumentointi lisää maailmanlaajuisesti parisuhdeväkivallan havaitsemista (20, 21, 34,) ja väkivallasta aiheutuneiden vaikutusten tunnistaminen mahdollistaa paremman hoidon potilaiden terveyden ja elämänlaadun parantamiseksi (21). Tunnistamatta jäänyt parisuhdeväkivalta lisää inhimillistä kärsimystä, vakavan vammautumisen tai kuolemaan johtavan väkivallan riskiä, mutta kuormittaa myös merkittävästi terveydenhuoltoa (15).

Puolison tai partnerin tekemä väkivalta muodostaa vain pienen osan väkivallasta kokeneista potilaista käyntitietojen mukaan, mutta Leppäkosken ym. (35) tutkimuksessa terveydenhuollon työntekijöistä yli 90 % ilmoitti hoitaneensa parisuhdeväkivaltaa kokeneita naispotilaita ja joka kolmas työntekijä kohtasi kuukausittain parisuhdeväkivaltaa kokeneita mies- tai naispotilaita. Kirjaamisen haasteita ovat mahdollisesti kiire, parisuhdeväkivallan tunnistamisen vaikeus tai diagnoosikoodien suuri määrä. Lisäkoodien käytön opettamiseen pitäisi kiinnittää enemmän huomioita (32). Diagnoosijärjestelmä kattaa kuitenkin ainoastaan sairaalahoidon tulleet potilaat, jotka muodostavat vain jäävuoren huipun väkivallan uhreista (36, 37).

Aineistoissa parisuhdeväkivaltaa kokeneista enemmistö oli nuoria naisia ja väkivalta tapahtui yöaikaan. Lisäksi alkoholin käyttö mainittiin usean uhrin tai tekijän kohdalla. Tutkimus vahvistaa aikaisempia tutkimustuloksia. Parisuhdeväkivaltaa kokenut potilas on useimmiten nuori alle 40-vuotias nuori nainen (17, 20, 34, 38, 39), jonka pahoinpitelijänä on yleensä puoliso tai elämänkumppani ja tapahtumapaikkana koti, mutta pahoinpitelijöinä voivat olla myös aikaisemmat kumppanit (34, 40). Alkoholin käyttö lisää sekä naisten että miesten väkivaltaisen käyttäytymisen riskiä (41). Sairaalaan tulosyynä on usein näkyvä, päähän kohdistunut fyysinen vamma (16, 17, 38) ja vammoihin annetaan hoitona useimmiten kipulääkkeitä, haavahoitoa sekä suoritetaan erilaisia radiologisia tutkimuksia (21). Fyysiset vammat pystytään kuvaamaan diagnoosien avulla mutta valtaosa väkivallan aiheuttamista sairaalakäynneistä ei liity fyysisiin vammoihin (16, 17). Fyysisten vammojen ohella on selkeästi riski psyykkisiin ja sosiaalisiin ongelmiin (39).

Puolison tai partnerin aiheuttama väkivalta tulee yhteiskunnalle kalliiksi, koska osa potilaista jäi osastohoitoon aiheutuneiden vammojen takia. Lisäksi vammat vaativat leikkaustoimenpiteitä, sovittuja kontrollikäyntejä sekä aiheuttivat uusia käyntejä väkivallasta myöhemmin ilmenneiden uusien oireiden takia. Osalla potilaista oli myös väkivaltaan liittyneitä aikaisempia sairaalakäyntejä ja aiheutuneiden vammojen kontrollikäyntejä. Naisiin kohdistuva väkivalta maksoi Suomessa vuonna 1998 terveydenhuollolle 6,7 miljoonaa, sosiaalitoimelle 14,8 miljoonaa ja oikeusjärjestelmälle 26,6 miljoonaa euroa (42).

Tämän tutkimuksen heikkoutena voidaan pitää tutkimusaineiston suppeutta (N = 606) ja aineiston keruun keskittymistä vain yhden sairaanhoitopiirin alueelle. Toisaalta tutkimustulokset saavat tukea suomalaisista ja kansainvälisistä tutkimuksista (20, 21, 43) joiden mukaan diag-

noosimerkinnot ovat osoittautuneet kansallisesti ja kansainvälisesti puutteellisiksi.

## JOHTOPÄÄTÖKSET

Parisuhdeväkivaltaa kokeneiden potilaiden määrä terveydenhuollossa on suurempi kuin diagnoosien perusteella näyttää. Päädiagnoosin avulla ilmoitetaan väkivallan aiheuttama vamma, mutta sen lisäksi tulisi käyttää lisäkoodia, joka mahdollistaa väkivallan tekijän ja tekotavan tilastoinnin. Lisäkoodien käyttö on puutteellista ja osin virheellistä. Tämän tutkimuksen perusteella suosituksena on:

1. Väkivallan tunnistamiseksi on entistä enemmän kiinnitettävä huomiota potilaiden taustatietojen selvittämiseen ja huolelliseen kirjaamiseen koko hoitajakson ajan. Tällä tavoin voidaan varmistaa hyvä hoito, jolla on vaikuttavuutta potilaan toipumiseen. Lisäksi voidaan mahdollisesti vaikuttaa potilaan elämäntilanteen parantumiseen. Kun väkivaltatilanne saadaan selville, potilasta voidaan auttaa laajemmin kuin vain korjaamalla fyysinen vamma.
2. Lisäkoodien merkitystä päädiagnoosien merkitsemisen lisäksi tulisi korostaa terveydenhuollon ammattilaisten, erityisesti lääkärin koulutuksessa ja niiden merkitsemiseen panostaa, jotta parisuhdeväkivalta saataisiin kattavammin tilastoitua terveydenhuollossa. Kaikkien terveydenhuollon ammattilaisten osalta toteutetun hoidon kirjaamisen kehittäminen ja siihen liittyvän koulutuksen tehostaminen on välttämätöntä.

Tunnistetun parisuhdeväkivallan avulla pystytään kohdistamaan resursseja ja toimia niihin asioihin, joiden avulla väkivaltaa voidaan vähentää ja sen eri osapuolia hoitaa yhteisesti sovittujen toimintatapojen mukaisesti. Näin voidaan lisätä yksilöiden, perheiden ja koko yhteiskunnan hyvinvointia.



The examination of the injuries of intimate partner violence has to be done carefully and all the findings must be documented. Intentional injuries require using the essential code of the injury but also using the external cause of injury code. This study was conducted to describe the features, given care and the documentation of patients of intimate partner violence in health care.

The sample (N=606) consisted of one health care district's electronic medical records of 304 patients with the external cause of injury codes X85-Y09 during the years 2008–2011 and 302 patients visits with the T74.1 physical abuse code

during the years 2008–2012. The data was analysed with content analysis.

Of the patients subjected to violence, 53 cases were spouse or partner related and the violence was diverse. Both men and female patients needed hospital visits. Gender (female), young age, alcohol and night time increased the risk of intimate partner violence. However, the coding was insufficient because more than half of the X85-Y09 external cause of injury codes and the electronic medical records didn't match and major part of the T74.1 visits were coded only using the essential code of the injury.

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# **PUBLICATION**

## **II**

### **The Documentation and Characteristics of Hospitalized IPV Patients Using Electronic Medical Records Data: a Follow-Up Descriptive Study**

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# The Documentation and Characteristics of Hospitalized IPV Patients Using Electronic Medical Records Data: a Follow-Up Descriptive Study

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## Abstract

Intimate partner violence (IPV) is a serious health problem worldwide but is often not identified by health services. The aim of this study was to describe the characteristics of healthcare patients and documentation compared to the baseline study (2008–2012). The sample ( $N = 798$ ) consisted of visits to a central hospital in Finland that had been marked with the ICD-10 codes for assault (X85–Y09) and physical abuse (T74.1) during the years 2013–2017. The data was analyzed with content analysis. Among the IPV visits ( $n = 110$ ), partner- or spouse-related perpetrator coding was poor (11%). Victims experienced multiple injuries, and the violence increased with female gender, alcohol, and nighttime. The insufficient use of perpetrator codes underestimates the incidence of IPV and minimizes their usefulness for surveillance.

**Keywords** Family violence · Intimate partner violence · Documentation · ICD-10

Intimate partner violence (IPV) is a serious health problem that imposes a major burden on public health and well-being. IPV occurs in all countries and settings and in all socioeconomic, religious, and cultural groups. Every year, violence causes healthcare costs and legal costs, absenteeism from work, and loss of productivity (Krug et al. 2002; World Health Organization [WHO] 2010). IPV includes physical violence, sexual violence, emotional abuse, and controlling behaviors by a partner. A partner is a current or former spouse (married spouse, common-law spouse, civil union spouse, domestic partner), boyfriend or girlfriend, dating partner, or sexual partner (Breiding et al. 2015). Almost one-third of women (30%) and men (29%) have experienced violence in a relationship (Reid et al. 2008; WHO 2013).

IPV leads to various psychological and physical consequences, including death. Women assaulted by an intimate partner are at a greater risk of injury than other women and have more frequent moderate-to-severe injuries (Zilkens et al. 2017). Violence affects the whole family, and the role of the family is central to the health and well-

being of individuals (Blinded et al., 2017). Early childhood and adolescent abuse are predictors in the development of IPV perpetration and victimization in adulthood (Costa et al. 2015; Ellonen et al. 2013; Ruddle et al. 2017). According to Widom et al. (2014), child maltreatment increases the risk for the most serious form of IPV involving physical injury. Adults with documented histories of child maltreatment are at an increased risk for a greater number and variety of acts of physical and psychological violence from an intimate partner.

IPV is a significant problem not often identified by health services. Both men and women experience violence, but few seek help from healthcare professionals (Kivelä et al. 2018). Previous studies have shown that victims and perpetrators with violent experiences have more hospital visits, several diagnoses, mismatches between reports, and a higher rate of readmission than patients who have not experienced violence (Chan et al. 2013; Matteoli et al. 2016). IPV victims are most often hit in the head, face, and neck (HFN) areas. Hence, the most common IPV-related injuries localize in the HFN area (Curca et al. 2012; Matteoli et al. 2016; Trojan and Krull 2012). Oral and maxillofacial traumas are very common among women victims, generating high social and economic costs (de Macedo Bernardino et al. 2018). Moreover, most victims present defense injuries on the upper limbs and/or fall-related injuries on the prominent parts of the body. Ideally, the victim should seek healthcare as soon as possible after violence to maximize injury identification. Some lesions

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fade or disappear after only a few days, decreasing characterization and dating accuracy (Curca et al. 2012).

Healthcare professionals have a vital role in both identifying and providing IPV victims with the necessary treatment, support, and care. Health services must be places where patients feel safe and are treated with respect and without stigmatization (McCauley et al. 2017.) According to Leppäkoski et al. (2014), approximately one-third of healthcare professionals had met or treated a patient who had experienced violence on at least one occasion. However, screenings for IPV vary, and very few emergency departments have procedures to identify victims. A lack of general preparedness, can lead to many patients not receiving appropriate care or treatment. The needed preparedness includes regulatory documents, written routines, organized education for personnel, delegation of specific responsibilities to staff, and information about continued support and care (Linnarsson et al. 2013).

## ICD-10 Coding in Healthcare

The International classification of diseases (ICD) is one of the oldest and most important classifications in healthcare. It is used as a coding system in medical databases for any injury or disease. ICD-10 codes are used for statistical purposes, and they can have enormous financial importance because they are used to determine how to allocate resources (WHO 2018). Intentional injuries require codes for both the essential and the external cause of injury. Most often, the essential codes are from “Chapter XIX: Injury, poisoning and certain other consequences of external causes” (S00–T98). This chapter uses the “S” section to code different types of injuries related to single body regions and the “T” section to cover injuries to multiple or unspecified body regions (WHO 2016).

The codes for external cause of injury are from “Chapter XX: External causes of morbidity and mortality” (V01–Y98). These codes are secondary codes used to provide additional information about the cause of an injury. The codes for external cause of injury include the injury mechanism and the identification of the perpetrator’s relationship to the assault victim. Perpetrator codes can be added when the code for the first external cause is from the range of interpersonal violence (assault) codes X85–Y09 (WHO 2016).

Unfortunately, the identification and documentation of IPV is still difficult and variable in healthcare. The documentation of injuries, evidence collection, and reports are not always consistently high quality. Assessment by healthcare professionals in forensic documentation and interpretation of injuries can result in a number of benefits for victims, including an increase in positive court outcomes, such as successful prosecution. (Nittis et al. 2013.) According to previous studies, patients’ denial of violence, the inconsistency between patients’ stories and their physical examinations, and lack of

time and resources are the main barriers in identifying violence (Bradbury-Jones et al. 2014; Leppäkoski et al. 2014; McCauley et al. 2017). Professionals need the knowledge and skills for identifying and responding appropriately to disclosures of IPV, which requires a commitment and multidisciplinary collaboration (Leppäkoski et al. 2015).

Research evidence exists regarding the outcomes of IPV, as well as healthcare workers’ important position in helping victims or perpetrators (García-Moreno et al. 2005). However, healthcare workers often have stereotypical beliefs about patients who experience IPV. Further training is needed to identify violence and gain knowledge about the dynamics of IPV (Ben Natan et al. 2012; Koistinen and Holma 2015; Leppäkoski et al. 2010). Overall, there is a great need to identify victims of violence and document the care provided in IPV cases. The ICD-10 coding can help victims, healthcare professionals, and researchers in the detection, treatment, and prevention of IPV (Kivelä et al. 2016). Training and intervention can lead to the implementation of new policies and procedures, increased IPV screening, and increased documentation (Ambuel et al. 2013).

## The Current Study

The aim of this follow-up, descriptive case study was to describe the documentation of hospitalized IPV victims and to assess whether the use of perpetrator codes improved from 2013 to 2017 compared to 2008–2012 (the baseline study). In addition, the characteristics of IPV and given care were assessed. IPV-related visits were defined from the hospital database and electronical medical records using ICD-10 coding.

## Methods

This follow-up descriptive study was carried out using a Finnish central hospital’s database and electronical medical records. The study was conducted to describe the documentation of IPV patients during the five-year period from January 1, 2013, to December 31, 2017. The baseline data were collected from the same hospital from 2008 to 2012 (Blinded et al. 2016). Research permit standards were carefully followed to conduct this research. The study was approved by the medical director of the hospital district (n § 175). Permissions from the hospital’s ethical committee and the National Institute for Health and Welfare were not necessary because the data consisted only of one health care district’s hospital database and because the patients were not contacted (Ministry of Social Affairs and Health 2012; Tays 2017). All the data were handled confidentially, and the participants’ anonymity was ensured.

First, the perpetrator codes for assaults (X85–Y09) were obtained from the hospital database, which uses the Finnish clinical modification of the ICD-10 (ICD-10-CM). Perpetrator codes are part of the secondary codes and can be used in interpersonal violence cases. In the U.S. version, code Y07 designates the perpetrator's relationship in an assault, whereas Y07.0 designates "spouse or partner, perpetrator of assault" (WHO 2016). The Finnish version differs, and Y07 does not designate the perpetrator, but the additional fourth and fifth character of the three-character assault codes (X85–Y09) does (National Institute for Health and Welfare 2011). After tracking the perpetrator codes, the three-character assault codes (X85–Y09) and the physical abuse code (T74.1) were added because the perpetrator codes might represent only the most obvious and most serious cases of IPV. The selection criteria was being 18 or older. This study excluded the code for "other forms of maltreatment" (Y07).

The sample ( $N = 798$ ) consisted of hospital visits marked with the selected ICD-10 codes found from total visits of the hospital database for all causes ( $n = 2,309,538$ ). To assess the characteristics of the victims, violence, and given care, the patients' electronic medical records for IPV visits were reviewed. Based on the content and information in the medical records, the violence was classified as related to or not related to a partner/ex-partner or spouse/ex-spouse ( $n = 110$ ).

Data analysis was performed with qualitative methods using deductive content analysis. This method allows for versatile phenomena to be described in a conceptual form. In addition, it is possible to simultaneously analyze data qualitatively and quantify the data using this method. Deductive content analysis was used to systematically search for the characteristics of the victims (age, sex, relation, length of hospital visit), the perpetrators, the acts of violence, the injuries, and the given care. Contents of the medical records were analyzed by breaking the text up into conceptual parts. These parts were then classified, coded, counted, and finally categorized to describe the data (Wilson 2011). Content analysis was selected for this study because it can handle large volumes of textual data from different sources and provide evidence, particularly for sensitive topics such as IPV. Moreover, the method is commonly used in different fields such as nursing studies and social sciences (Elo and Kyngäs 2008; Wilson 2011).

## Results

### Documentation of Violence

The sample consisted of 798 visits from 2012 to 2017, as presented in Table 1. Of these, 423 visits (53%) included a code for external cause of injury (X85–Y09), and 375 visits (47%) included the physical abuse code (T74.1). The number of IPV visits increased each year. The most common code for

external cause of injury was "assault by bodily force" (Y04; 21%). Overall, the number of hospital visits increased from the baseline study.

### The Prevalence of IPV among Hospital Patients

Of the 798 IPV visits, 12 patients (1.5%) had the spouse or partner perpetrator code. The number of perpetrator codes had decreased from the baseline study, presented in Table 2. The most reported type of spouse/partner-related violence was "assault by bodily force" (Y04.0) during both study periods. The least reported types were "assault by rifle, shotgun and larger firearm discharge" and "assault by blunt object."

As presented in Table 3, analysis of the essential physical abuse code T74.1 revealed various perpetrators of violence and that the overall number of these visits increased during the ten-year period (2008–2017). Over half of all visits (59%) had a person unknown to the victim as the perpetrator or no information concerning the perpetrator. However, a fifth of patients (21%) experienced violence caused by an ex-partner or spouse, and a fourth of visits (24%) with the code T74.1 were partner- or spouse-related.

In total, 110 visits (13%) were caused by IPV. These visits involved 92 victims, but only 12 of their medical records (13%) included a perpetrator code. Hence, 80 of the patients' medical records were missing a perpetrator code. Of these missing codes, 10 patients had only a three-character external cause of injury code (X85–Y09), and 70 patients had only the essential T74.1 physical violence code. Originally, the T74.1 code consisted of 88 visits, but six were repeat patients who had both the T74.1 code and a perpetrator code from the complementary codes X85–Y09. In addition, 12 visits were follow-up visits after the first hospital visits. On the whole, 92 patients experienced spouse- or partner-related injury.

### Characteristics of the Victims and Circumstances of the Violence

In total, 92 patients experienced IPV. Most patients were identified from emergency department visits. The characteristics of the patients are presented in Table 4. The majority of the patients (93%) were women, and of all of the patients, more than half (52%) were 30 to 59 years old. The ages ranged from 18 to 70 years old.

Most of the perpetrators were husbands or boyfriends (78%). One out of ten (10%) were an ex-partner or spouse. Both men and women patients required hospital care, and 90% of the visits were during the evening or nighttime. A large proportion of patients (57%) had missing location information. Every third (33%) patient experienced violence at home, and the other locations included apartments, bars or restaurants, public places, and a car. Five patients were pregnant during the acts of violence. More than half (58%) had used alcohol

**Table 1** Diagnostic codes X85–Y09 and T74.1, 2013–2017

X85–Y09 and T74.1 ( <i>n</i> = 798)	2013	2014	2015	2016	2017	<i>n</i>	%
X85 Assault by drugs, medicaments, and biological substances			7	15	11	33	4
X91 Assault by hanging, strangulation, and suffocation	2	1		4		7	1
X94 Assault by rifle, shotgun, and larger firearm discharge					1	1	
X95 Assault by other and unspecified firearm discharge	3	3		11	6	23	3
X99 Assault by sharp object	10	10	8	20	15	63	8
Y00 Assault by blunt object	2	11	1	2	7	23	3
Y04 Assault by bodily force	28	28	51	30	35	172	22
Y05 Sexual assault by bodily force	4	3	3		2	12	1
Y08 Assault by other specified means	3	6	4	5	10	28	3
Y09 Assault by unspecified means	8	2	7	21	23	61	8
T74.1 Physical abuse	38	51	86	78	122	375	47
Total	98	115	167	186	232	798	100

before the violence. The perpetrator was said to have used alcohol in 17% of the medical records. One-fourth (24%) of the patients mentioned previous violence in their relationships. Of all the patients, more than half (66%) had two or more diagnostic codes during the hospital visit. The number of diagnostic codes per patient varied from one to seven.

### Characteristics of the Violence and Given Care

Various acts of violence were used, and more than half (59%) of the perpetrators had used more than one act, causing several injuries (82%). The characteristics of violence and given care are presented in Table 5.

The most common acts were hitting the head or face (36%), throwing or flinging (30%), strangulation (29%), hitting an object to head (15%), and whacking a head against something (13%). Most of the wounds and injuries were contusions in the body (38%) and in the head or face (37%). Almost a third of the patients (30%) had bodily pain. Ten fractures were reported and occurred in the eye socket, clavicle, hand, finger, tibia, and ankle.

More than half of the patients (70%) had their vitals measured, and almost half (46%) had some radiological examinations done during the visit. Pain medication was given to 41% of patients. Pictures were taken of the wounds and injuries in 41% of patients. In addition, police had taken pictures from five patients, and two patients had refused to be photographed. Overall, 45 patients' injuries (49%) were photographed or offered the possibility. Child welfare reports were completed for six patients.

Of the 92 patients, 12 (13%) stayed in the hospital more than one day, and one was transferred to safe house. Lengths of stay were calculated from the number of full and partial days a patient was in the hospital. Cases in which patients were admitted and discharged from the hospital on the same day were counted as one day. Of the hospitalized patients, one victim was referred to a university hospital, and two underwent operations, which were for the ankle and tibia fractures. After their first hospital visits, 15 patients were involved in 30 additional visits. Of those 30 visits, 28 were polyclinic control visits, which varied from one to seven visits per patient. Two patients had new emergency visits due to the

**Table 2** Perpetrator codes, 2008–2012 and 2013–2017

Perpetrator code	2008– 2012	2013– 2018	<i>n</i>	%
X91.0 Assault by hanging, strangulation, and suffocation caused by spouse or partner	1	4	5	15
X93.0 Assault by rifle, shotgun and larger firearm discharge caused by spouse or partner	1		1	3
X99.0 Assault by sharp object caused by spouse or partner	3	2	5	15
Y00.0 Assault by blunt object caused by spouse or partner	1	1	2	6
Y04.0. Assault by bodily force caused by spouse or partner	14	5	19	55
Y05.0 Sexual assault by bodily force by spouse or partner	1		1	3
Y08.0 Assault by other specified means by spouse or partner	1		1	3
Total	22	12	34	100



**Table 3** Relationship of the perpetrator to the victim by T74.1 code, 2008–2012 and 2013–2017

Perpetrator	2008– 2012	2013– 2017	n	%
Spouse or partner	46	82	128	19
Ex-spouse or -partner	10	6	16	2
Acquaintance or friend	45	84	129	20
Person unknown to the victim	123	91	214	33
Unspecified person	60	112	172	26
Total	284	375	659	100

previous wounds or injuries. The prescribed sick-leave time for all IPV patients combined was 10 months and 3 weeks.

## Discussion

Overall, 110 visits were partner- or spouse-related violence. However, the coding was insufficient, as only 12 visits

**Table 4** Characteristics of patients ( $n = 92$ )

Patient (T74.1 + X85–Y09)		n	%
Gender	Men	6	7
Age	Women	86	93
	Under 30	38	41
	30 to 59	52	57
	60 or more	2	2
Perpetrator	Husband/partner	38	41
	Wife/partner	4	4
	Boyfriend	40	44
	Girlfriend	1	1
	Ex-partner	9	10
Location	Home	30	33
	Other place	9	10
	Unspecified place	53	57
Time of the hospital visit	Daytime (06–18)	9	10
	Evening/night (18–06)	83	90
Alcohol, patient	Yes	58	63
	No (or not known)	34	37
Alcohol, perpetrator	Yes	16	17
	No (or not known)	76	83
Length of hospital visit	One day	80	87
	Two days	7	8
	Three days or more	5	5
Number of diagnostic codes	One	31	34
	Two	26	28
	Three or more	35	38
Perpetrator code added	Yes	13	14
	No	79	86

(11%) were coded with a perpetrator code. The number of perpetrator codes decreased from the baseline study even though the general number of visits with assault and physical violence codes increased. The perpetrator codes underestimate the incidences of IPV because a significant number of visits were coded only with the essential codes of the injuries. Previous studies have proven that documentation and coding are insufficient in IPV cases (Btoush et al. 2009; Schafer et al. 2008). To improve the standard of assessment and documentation, health services should train staff and use a purpose-designed IPV intervention form containing risk assessment questions and a body map (Ritchie et al. 2013).

Both men and women experienced violence, and violence was experienced in every age group. In the baseline study, most of the violence happened to those under 40 years old (57%). However, in this follow-up study, most of the violence happened to people 30 to 59 years old (57%). Female gender, young age, use of alcohol, and nighttime increased the risk of IPV, which is consistent with previous research (Schafer et al. 2008; Bonomi et al. 2009; Btoush et al. 2008). In comparison to other age groups, the proportion of victims above 60 or more requiring hospitalization was very small (two patients).

The rates of hospitalization were much higher in women than in men. Only six men reported IPV, and they were all over 30 years old. A previous study showed that men victims have lower rates of seeking help and that the age of these victims is usually 40 or older (Choi et al. 2015). Furthermore, although men are more likely to initiate physical contact and use physical force, women have higher levels of physical and psychological aggression. Couples with IPV arrests have elevated levels of physical and psychological aggression in both partners compared to couples not involved in an arrest incident. (Capaldi et al. 2009.) The number of men victims may be lower because men tend to underreport and hide this kind of victimization, and also because their injuries are usually mild (Carmo et al. 2011; de Macedo Bernardino et al. 2016). Men victims may be reluctant to report violence for fear of being rejected, humiliated, and ridiculed by healthcare professionals (Barber 2008; Kumar 2012).

Of cases with specific information on the location of the assault, the victim's home was most common. In line with previous literature that has shown IPV victims are more likely to be assaulted at home (Yau et al. 2013), we found for both women and men, victims assaulted at home had an elevated risk of IPV. Violence was also experienced during pregnancy. According to Almeida et al. (2017), violence during pregnancy is associated with greater odds of child physical maltreatment, which underscores the importance of screening pregnant women to prevent violence to young children at an early stage (Chan et al. 2012).

Consistent with other studies, the findings suggest that victims experience multiple superficial injuries and contusions, particularly located on the head and trunk, and present with

**Table 5** Characteristics of violence, given care, and different examinations

Act of violence	n	Wound/injury	n	Given care and examinations	n
Hit the head or face	33	Contusions in the body	35	Vitals	64
Threw or flinged	28	Contusions in the head or face		Radiologic testing	42
Strangled	27	Bodily pain	34	Pain medication	38
Hit head with an object	14	Headache	28	Photographing injuries	38
Whacked head against something		Headache	26	Mental aid/crisis intervention	15
	12	Bruises in the body	23	Wound suturing	15
Tore hair	9	Swelling in the head or face	21	Laboratory tests	14
Twisted or pressed a limb	9	Bruises in the head or face	17	Wound care	12
Kicked the body	8	Bump in the head	14	Splinting/plaster/binding	10
Hit the body	8	Fracture	10	Commotion tracking instructions	8
Kicked the head	6	Momentary			
Threatened verbally	6	unconsciousness	9	Cold bag	8
Hit body with an object	5	Swelling in the body	8	Child welfare report	6
Stabbed	5	Visual symptoms	8	Wound care instructions	5
Sat on	4	Nausea	7	Antibiotic	5
Bit	3	Bit	7	Operation	2
Pressed/Tore face	3	Stabbing wound	6	Tetanus-vaccine	2
Insulted	2	Vomiting	5	Gynecological examination	2
Held onto	2	Dizziness	4	Eyes flushing	1
Hit body with an object	1	Nosebleed	3	Patient guidelines for violence	1
Sexual violence	1	Bite wound	2		
Threatened with a knife	1	Bleeding from the ear	2	Plaster therapy patient instructions	1
		Broken or swinging tooth	2		
Pressed hand to mouth and nose	1	Molten eye or eyes	2		
	1	Loss of hearing	1		
Pepper sprayed face		Limping	1		
		Nail traces in the body	1		
		Broken hair	1		
		Brain injury	1		
		Hematoma in the eye	1		
		Gynecological bleeding	1		
		Bleeding from the mouth	1		
		Hard to open mouth	1		
		Humming in ears	1		
Total	189		283		289

bodily pain (Danielle et al. 2015; Perciaccante et al. 2010; Yau et al. 2013). Both physical and psychological violence can be lethal. Most of the IPV victims subjected to any kind of physical violence feel that their lives are in danger during the abuse. Moreover, during psychological violence, victims that feel their lives are in danger are threatened verbally to be killed. (Vatnar and Bjørkl 2013.)

The majority of patients received radiologic testing, wound care, and pain medications, as in a previous study (Btoush et al. 2009). Most of the injury photographs were taken by nurses, but some were taken by police. However, photographs were not always taken, and the patient guidelines for violence were distributed to only one patient. According to Deutsch

et al. (2017), victims are rarely asked about injuries unless they are immediately visible. Photographs are important for all victims seeking legal remedy. The hospitalization of IPV victims hospital was costly to society because of the several diagnoses, hospital admissions, follow-ups, and sick-leave involved. Most of the patients stayed in the hospital for one to three days and were then discharged with follow-ups, like in a previous study (Chan et al. 2013).

### Methodological Considerations

This study has several limitations. First, the participants represented patients only from a single-district, central

hospital in Finland, which is a relatively small study sample ( $N = 798$ ). Second, the lack of IPV identification, documentation, and proper coding were the major limitations of this study. Third, violence is still a very sensitive issue, and the results can be affected by denial. Some patients may state a false reason for their injuries (such as an accident instead of violence).

## Conclusion

This results of this study suggest a great need for health services to improve documentation and coding of IPV. The poor use of perpetrator codes underestimates the incidences of violence and minimizes their usefulness for surveillance. Various patients in different healthcare settings can have an IPV background. A lack of general preparedness to identify and care for victims can lead to many patients not receiving appropriate care and treatment. Multidisciplinary collaboration between health, legal, and social service professionals is needed to provide comprehensive care.

The perpetrator codes are not used enough even though they strengthen the completeness of perpetrator documentation. Health professionals' knowledge and awareness are crucial in the identification and documentation of IPV. There is a need to implement guidelines and screening tools to enhance identification, documentation, and victim care. More research is needed to determine effective methods to improve identification, documentation, and proper coding of victims.

The following recommendations for supporting providers in improving documentation can be drawn from the results of this study:

1. Careful documentation of IPV and especially the use of proper perpetrator codes improves the visibility of the problem and its impact on the victims, families and health services.
2. The identification of IPV requires careful negotiation of the prerequisites and courage to ask and suspect the possibility of violence.
3. With the identified IPV and close multidisciplinary collaboration, violence reduction and injury prevention can be significantly improved.

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# **PUBLICATION**

## **III**

**A cross-sectional descriptive study of the family functioning, health and social support of hospital patients with family violence backgrounds**

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# A cross-sectional descriptive study of the family functioning, health and social support of hospital patients with family violence backgrounds

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## A cross-sectional descriptive study of the family functioning, health and social support of hospital patients with family violence backgrounds

Family violence (FV) has serious effects on the health and well-being of the family. The health sector plays a vital role in FV prevention by helping to identify abuse early, providing victims with the necessary treatment and referring patients to appropriate care. The aim of the present cross-sectional study was to describe the prevalence of FV among hospital patients, as well as to assess the association between family functioning, health and social support, considering patients as the perpetrators or victims of violence. The data were collected using a Family Functioning, Health and Social Support (FAFHES) questionnaire that was given to patients who visited a Finnish central hospital between October 2012 and April 2013. As a result, the data (N = 188) were contributed by the patients who returned the questionnaire and gave permission for a follow-up survey. The participation rate was 47%, of which 73% were women and 27% were

men. Their ages ranged from 18 to 89 years. The data were analysed with quantitative methods using the unadjusted analyses and linear regression model. In total, 24% of both the male and female participants had experienced or used violence at home or in the family. Of these, 22 had been the perpetrators, and 23 had been the victims. Participants in relationships and who were living together had less violence than singles and those who were not living together. The family functioning and health of the participants who had experienced or used FV were worse than those of the participants who had not. Various patients can have an FV background, and nursing professionals are on the front line to identify and intervene in FV situations. The results of this study can be utilised in the treatment of FV victims and perpetrators by training healthcare workers to identify and intervene in violence.

**Keywords:** family violence, domestic violence, family functioning, family health, social support.

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## Introduction

Violence is a violation of human rights that affects every country and community. Violence at home or in the family can cause harm that lasts a lifetime and spans generations, with serious effects on health and well-being, education and employment (1). Family violence (FV) occurs at every level of society and influences the whole family. Besides physical aggression, such as hitting or kicking, violence includes psychological abuse, controlling behaviour, forced intercourse and other forms of

sexual coercion. In addition, child and elderly abuse includes neglect by parents or other caregivers, and especially elderly people are especially vulnerable to economic abuse (2). Violence profoundly damages the physical, emotional, sexual, reproductive, mental and social well-being of individuals and their families (1, 3, 4).

Both men and women experience FV, and it also occurs between partners of the same sex (2). Globally, almost one-third (30%) of all women who have been in a relationship have experienced physical and/or sexual violence by their intimate partners, and as many as 38% of all murders of women are committed by intimate partners (5). Moreover, 29% of men have experienced either physical or nonphysical violence in their relationship (6). In Europe, 28% of older women have experienced

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violence or abuse in the last 12 months, and the perpetrators have, in most cases, been partners or spouses (7).

In the family, children and adolescents are also affected by violence. In a study by Chapin and Coleman (8), nearly one-third (28%) of adolescents had experienced some form of physical assault in the home. Witnessing FV and exposure to parental violence are associated with deteriorated health, dissatisfaction with life and school bullying, as well as deteriorated family relationships, dating relationships and sexual activity (9–11). For children, witnessing violence increases the risk of health problems more than experiencing the actual physical violence of parents. Children who have both had to witness violence and have been victims of physical violence are four times more likely to experience both physical and mental health problems than children who have no experience of physical violence (12). Experiencing violence can damage the mental health of children and adolescents in multiple ways, such as causing depressive and anxiety-related problems, hyperactivity, post-traumatic stress disorder symptoms and delinquent behaviour (13–15).

During pregnancy, almost one in five (19.8%) mothers and fathers experienced either physical violence or emotional abuse. In addition, violence during pregnancy strongly predicts violence after pregnancy (16). FV is a significant risk factor for unwanted pregnancy, abortion and pregnancy-related complications, miscarriage, pregnancy trauma, placental abruption and premature labour. Moreover, violence affects the health of an infant in the form of low birthweight, less than excellent general health and difficult temperament (17–19).

The health sector plays a vital role in preventing FV, helping to identify abuse early, providing victims with the necessary treatment and referring patients to appropriate and informed care. Health services must be places where patients feel safe, are treated with respect, are not stigmatised and can receive quality and informed support (3). Male victims in particular may be reluctant to report violence for fear of being rejected, humiliated and ridiculed by healthcare professionals (20, 21).

Previous studies have shown that patients with violent experiences have more hospital visits than patients who have not experienced violence (22). Victims and perpetrators of FV visit hospitals regularly, and according to Blinded *et al.* (23), approximately one-third of healthcare workers had, on at least one occasion, met or treated a patient who had experienced FV. In addition, the number of treated male patients was higher than in previous years. The identification of violence in health care is still difficult because of patients' denial of violence, the phenomenon of violence being a sensitive issue and the inconsistency between patients' stories and physical examinations (23, 24).

Healthcare workers often have stereotypical beliefs about patients who experience FV, and it is important to

educate staff about the dynamics of violence (25). Further training is also needed to identify violence and gain knowledge regarding how to ask about it (26–28). Training improves healthcare professionals' confidence, practice and skills in the identification and response to FV (29). With training and intervention, new policies and procedures, increased patient education and increased documentation, FV screening can be implemented (30).

Some research evidence exists regarding the outcomes of violence, as well as healthcare workers' important position in helping patients who have experiences of violence. However, little is known about the functioning and health of FV perpetrators or victims and the social support they receive in healthcare settings. Family functioning includes the degree to which one has a successful everyday life and the interaction between family members. Health consists of actions and activities that promote the family's well-being; social support includes the help and emotional support that is given by professionals in healthcare settings (31). However, it is essential to know more about these issues in order to provide information to various parties about violence and to enable them to have different perspectives on FV.

## Aims

The aim of the present study was to describe the prevalence of FV among the hospital patients who visited the central hospital, as well as to assess the association between family functioning, health and social support, considering both men and women as perpetrators or victims of violence.

## Methods

### Study design

This cross-sectional descriptive study was carried out in one Finnish central hospital, and using quantitative methods, the study investigated the association between FV and family functioning, health and social support. The study was approved by the Pirkanmaa Hospital District Ethical Committee (ETL R12057H). The hospital units, as well as all the participants, were informed about the study. The participants signed written informed consent forms. They were also informed that they could withdraw at any time. All the data were handled confidentially, and the participants' anonymity was ensured (32, 33).

### Study population

The data were part of a larger body of data that was collected at one central hospital in Finland from October 2012 to April 2013. A total of 795 questionnaires were

delivered by the nursing professionals (nurses) in seven different units, and 371 (47%) questionnaires were returned. Each unit separately determined the correct time and the number of shared questionnaires. The questionnaires were distributed to all patients or family members who could fill in questionnaires without specific selection criteria. The participants were not paid or interviewed. As a result, for this study, the data ( $N = 188$ ) were derived from the patients and family members who returned the questionnaire and gave permission for a follow-up survey (34).

The participating units of the hospital were the emergency; maternity; and ear, nose and throat outpatients clinics, as well as the acute psychiatric, orthopaedic and cardiology wards. The participants were given the option to fill out the questionnaire after their outpatient clinic appointments or before being discharged from the ward. It was also possible to take the questionnaire home and return it by mail (34).

### *Instruments*

The data were collected using a 6-point Likert scale Family Functioning, Health and Social Support (FAFHES) questionnaire. This scale ranges from 1 (strongly disagree) to 6 (strongly agree). FAFHES is used to assess family functioning, health and social support, and the questionnaire has been developed and tested with different patient groups (25, 35). Furthermore, the questionnaire was modified and included specific questions about physical or emotional violence at home or in the family (34).

The FAFHES questionnaire has four parts: A-D. Part A consists of general characteristics. The participants were asked about their age, gender, marital status and employment status whether they lived in the same household as their family members, and their history of hospital visits and illnesses. Parts B to D consist of the three domain scores. Part B is the family functioning score consisting of 25 items about relationships between family members, family resources and risk factors. Part C is the health score, consisting of 18 items about family values and welfare, patients' knowledge of their own or family members' health, family ill-being and activities maintaining family well-being. Part D is the social support score, which consists of 18 items, including valuation, respect and feeling of security, and feedback and support from the healthcare workers (34).

The FAFHES questionnaire includes six specific questions about violence. Two of them are in part A, in which the participants were asked if the reason for the hospital visit was violence, and if it was, what the content of the violence was. In the health part, four items were for the victims or perpetrators of the physical or emotional violence and addressed the history of hospital

visits because of the injuries or their own violent behaviour.

### *Statistics*

The data were analysed using quantitative methods. Statistical analyses were conducted using IBM SPSS Statistics 22 (IBM Corporation, Armonk, New York, USA), and the data are presented as median or frequencies as appropriate. Participants with or without violence were classified into three categories to compare their characteristics and the three domain scores. The categories were classified by the four specific violence items of the Health (part). The first group comprised participants who had experienced no physical or emotional violence at home or in the family. The second group was composed of perpetrators who had used violence and/or sought help from a healthcare professional due to their violent behaviour. The third group comprised victims who had experienced violence and/or had previous hospital visits because of the injuries. The variables were categorised into two groups: scaling 1–3 as no violence and 4–6 with violence.

Family functioning, health and social support are the three domain scores, and every domain had to have 80% of the items answered. The number of items varied in each domain, and the minimum number of answered items varied from 20 of 25 for family functioning to 14 of 18 for social support. The health domain had 18 items, but the four violence items were left out, so the minimum was 11 of 14 items.

The chi-square test and Fisher's exact test were used to compare general characteristics between the three groups. Furthermore, the Mann–Whitney *U*-test and Kruskal–Wallis tests were used to compare family functioning, health and social support between the three groups. In addition, the skewed FAFHES variables were square transformed, and these were modelled using linear regression with gender, marital status and living in the same household with family members as covariates, together with the three-group violence variable (no violence, perpetrators or victims). The level of significance was set as  $p < 0.05$  (36, 37).

## **Results**

### *Characteristics of patients*

The characteristics of the patients are presented in Table 1. The majority of the participants (73%) were women, and of all of the participants, nearly half (40%) were 30–60 years old (average age 45 years). The age varied between 18 and 89 years. Most of the participants (85%) were married or living with a partner. Slightly fewer than one out of three (31%) were working. The majority (81%) lived in the same household with other

**Table 1** Characteristics of participants (n = 188) who visited one central hospital from October 2012 to April 2013 in Finland. 73% of the participants were women and 27% men. Age varied between 18 and 89 years

	n	%
Gender		
Men	51	27
Women	137	73
Age		
Under 30	54	29
30–59	75	40
60 or more	58	31
Marital status		
Married/living with partner	159	85
Single (single, divorced, separated, widow)	29	15
Employment status		
Working	57	31
Not working (unemployed, sick leave, pension, other)	130	69
Living in the same household with family members		
Yes	152	81
No (no or with some family members)	35	19
Hospital unit		
Outpatient clinic	125	68
Ward	39	21
Other	21	11
Hospital visit		
Own visit	178	95
Child's or other relative's visit	10	5
Hospital care because of the violence		
Yes	2	1
No	185	99
The length of the hospital visit		
<1 day	121	70
1–6 days	36	21
1 week or more	15	9
Previous hospital visit because of the same illness or symptoms		
Yes	125	71
No	52	29
The number of previous hospital visits		
One to two times	37	30
More than two times	87	70
Procedures done earlier in the previous hospital visit		
Yes	100	60
No	68	40

family members, and the rest lived either by themselves or with some family members.

Most of the hospital visits were outpatient clinic appointments (68%), and 70% stayed <1 day in the hospital. Only 10 participants were family members assisting their children or a spouse. Most of the hospital visits (69%) included different examinations and procedures. Almost three-quarters of the participants had been in the hospital before because of the same illness or symptom, and the majority of these patients (79%) had more than two visits.

### *The prevalence of violence among hospital patients*

In total, every fourth participants (24%) had experienced or used violence at home or in the family, as presented in Table 2. Of these, 33 (73%) were women, and 12 (27%) were men, and 22 were perpetrators, and 23 were victims. Of all the participants, every fourth (24%) woman and man had experienced or used violence. Most of the violence had happened to those over 60 years old (31%). Every one in five (19%) had violence in their relationships. Nearly half of the patients (47%) who stayed 1 week or more in the hospital had experienced violence.

Only two participants came to the hospital because of FV. One patient had experienced physical violence when her husband hit her, and the reason for the hospital care was her suicide attempt. The other patient had been a victim of emotional violence, and the reason for the hospital care was the family's concern regarding her burden. Both of these patients were also perpetrators of violence, according to their own responses.

### *Perpetrators and victims of violence at home or in the family*

In total, 22 participants were perpetrators – 18 women and four men. Six women and one man were only inflicting violence, and 12 women and three men were both perpetrators and victims. In total, 23 participants were victims of violence. Of these, eight were men, and 15 were women. Participants in relationships ( $p < 0.05$ ) and those who were living together ( $p < 0.05$ ) had less violence, than those who were singles or not living together (Table 2).

### *Family functioning, health and social support*

The between groups and gender comparison with family functioning, health and social support are presented in Table 3. Significant differences regarding family functioning and health were found between patients with violence experiences. For participants who used or experienced violence, their family functioning ( $p = 0.002$ ) and health ( $p = 0.004$ ) were worse than those of participants without FV. Both family functioning and health were comparatively worse among the perpetrators, and family functioning in particular was poor among the perpetrators. Moreover, significant differences were found between gender and health ( $p = 0.043$ ). Female participants experienced better health than their male counterparts. However, there was no significant difference between groups with regard to social support, although it seemed to be slightly lower among the perpetrators. The interpretation of the effect of FV on family functioning, health and social support did not change when linear regression models with square-transformed dependent variables and covariates were assessed. However, the association between gender and health was slightly diminished ( $p = 0.066$ ). Family

**Table 2** Characteristics of participants and the experienced violence ( $n = 188$ ) who visited one central hospital from October 2012 to April 2013 in Finland. 73% of the participants were women and 27% men. Age varied between 18 and 89 years

	<i>p</i> -Value	No violence ( $n = 143$ ) <i>n</i> (%)	The perpetrators ( $n = 22$ ) <i>n</i> (%)	The victims ( $n = 23$ ) <i>n</i> (%)
Gender				
Men		39 (76)	4 (8)	8 (16)
Women		104 (76)	18 (13)	15 (11)
Age				
Under 30		42 (78)	6 (11)	6 (11)
30–59		60 (80)	8 (11)	7 (9)
60 or more		40 (69)	8 (14)	10 (17)
Marital status				
Married/living with partner	0.003	128 (81)	16 (10)	15 (9)
Single		15 (52)	6 (21)	8 (27)
Employment status				
Working		50 (88)	3 (5)	4 (7)
Not working		93 (71)	19 (15)	18 (14)
Living in the same household with family members				
Yes	0.004	123 (81)	14 (9)	15 (10)
No		19 (54)	8 (23)	8 (23)
Hospital unit				
Outpatient clinic		95 (76)	15 (12)	15 (12)
Ward		31 (80)	3 (8)	5 (12)
Other		14 (67)	4 (19)	3 (14)
Hospital visit				
Own visit		134 (75)	21 (12)	23 (13)
Visit of a child or other relative		9 (90)	1 (10)	
Hospital care because of the violence				
Yes			2 (100)	
No		142 (77)	20 (11)	23 (12)
The length of the hospital visit				
<1 day		99 (82)	9 (7)	13 (11)
1–6 days		27 (75)	5 (14)	4 (11)
1 week or more		8 (53)	4 (27)	3 (20)
Previous hospital visit because of the same illness or symptoms				
Yes		94 (75)	15 (12)	16 (13)
No		42 (80)	5 (10)	5 (10)
The number of the previous hospital visits				
One to two times		28 (76)	4 (11)	5 (13)
More than two times		65 (76)	11 (12)	11 (12)
Procedures done earlier in the previous hospital visit				
Yes		78 (78)	13 (13)	9 (9)
No		49 (72)	7 (10)	12 (18)

functioning, health and, social support were worse for those who did not live with family members. Marital status (married or living with a partner vs other options) was not significant in any models.

## Discussion

### *Prevalence of violence and patients' characteristics*

In total, about a quarter of the participants had a history of FV, and it was experienced in every age group and

every unit. As noted by Hamberger and Larsen (38), both men and women experience violence and practice physical and emotional violence. Most perpetrators of both genders are also victims.

Only two women reported that FV was their reason for being at the hospital. As shown in the previous studies, only a few victims report this kind of violence (3, 39). Men and women are most likely to seek support for violence from family and friends rather than from institutions or organisations. Help is increasingly being sought for more serious and more common violence. Victims

**Table 3** Median values of family functioning, health and social support of participants (n = 188) who visited one central hospital from October 2012 to April 2013 in Finland, separately for the experience of violence and gender, with estimates from multivariable linear regression models using squared FAFHES variables

	Family functioning				Family health				Social support			
	Median	Unstand. beta coef.	Standardised beta coef.	p-Value	Median	Unstand. beta coef.	Standardised beta coef.	p-Value	Median	Unstand. beta coef.	Standardised beta coef.	p-Value
Constant		21.969		0.000		23.051		0.000		25.458		0.000
Men	4.76	–	–	–	4.79	–	–	–	5.00	–	–	–
Women	4.96	1.779	0.118	0.077	5.00	1.618	0.125	0.066	5.00	–0.337	–0.020	0.792
In a couple relationship	–	–	–	–	–	–	–	–	–	–	–	–
Not in a couple relationship	–1.577	–0.085	–0.085	0.322	–0.251	–0.251	–0.016	0.856	–	–0.625	–0.030	0.750
Living with family members	–	–	–	–	–	–	–	–	–	–	–	–
Not living with family members	–4.677	–0.272	–0.272	0.002	–4.596	–4.596	–0.313	0.000	–	–3.893	–0.204	0.033
No violence	4.98	–	–	–	5.00	–	–	–	5.00	–	–	–
Perpetrator	4.08	–4.967	–0.239	0.001	4.71	–3.353	–0.189	0.007	4.78	–2.017	–0.085	0.271
Victim	4.56	–1.880	–0.092	0.181	4.79	–1.972	–0.113	0.107	5.06	2.366	0.104	0.182
	0.079*				<b>0.043*</b>				0.654*			
	<b>0.002**</b>				<b>0.004**</b>				0.258**			

\*Mann-Whitney U-test p-value for differences in gender.

\*\*Kruskal-Wallis test p-value for differences in experience of violence.

who experience severe FV forms are more likely to seek help (40–42). In particular, men do not trust professionals and avoid asking for help, because they feel that they are being blamed and labelled by professionals (43).

More than half of the patients whose hospital visits lasted 1 week or more were had experiences of violence. Previous studies have shown that patients with violent experiences have more hospital visits than patients without (22, 44). Moreover, for patients with violent experiences, the average duration of hospital care is longer, and medical treatment expenses are higher than for patients with no violent experiences; in addition, the former are diagnosed with several diagnoses (45). The care of patients requires social and healthcare professionals' cooperation, and they need to follow written principles and common procedures. The professionals need the appropriate knowledge and skills for identifying and intervening in FV, and this requires a commitment to training from the workers, their superiors and the trustees (46, 47).

Participants' marital status and living together in the same household with family members was associated with violence. Not being in a relationship and not living together increased the risk of violence compared with being in a relationship and living together. Marital status was also found to be related to the risk of FV, based on the findings of studies conducted by Leone et al. (17) and Gustafsson et al. (48).

#### *Family functioning, health and social support*

For participants with experiences of FV, and especially for its perpetrators, their family functioning was worse than for participants with no experience of violence. Previous studies have shown that the family structure, organisation, resources, stability and relationships between family members have a significant effect on family members' levels of stress, their management of conflicts and the frequency of their violent interaction. Individuals with a lower household income, the unemployed and residents who have lived for a shorter time in the community are more likely to experience FV (49). Family functioning indicated by the stress of parenting was associated with higher levels of children's post-traumatic stress symptoms (50). Violence in adolescence has also been strongly linked to parental conflict and related to concurrent post-traumatic stress and subsequent delinquency. Delinquent adolescents perceived their parents as having a higher level of dysfunctional parental partner dynamics, poorer family functioning and a higher level of FV (51, 52).

For participants with experiences of FV, and especially for its perpetrators, their health was worse than for participants with no experience of violence. In Hellmuth et al.'s (53) study, women's perpetration was also associated with

negative health outcomes. In addition, men and women involved in intimate partner violence as both victims and perpetrators are negatively associated with health-related quality of life (54). FV exposure as an adult is associated with a lower physical and mental health status (55, 56). Women were at increased risk of physical and mental health symptoms, and men were at increased risk primarily for mental health symptoms (57).

Social support seemed to be slightly lower among the perpetrators. Earlier studies indicate that patients' lack of unawareness regarding the negative consequences of FV can prevent them from asking for professional support or that patients experienced difficulties when accessing healthcare services. These difficulties can be attributed to inappropriate responses by healthcare professionals, discomfort with the healthcare environment, perceived barriers to disclosing FV and a lack of confidence in the outcomes of disclosure to a health professional (58, 59). The nursing professionals are the front line in the battle to identify FV patients, and as observers, the professionals can identify the unique needs of the patients affected by FV (60). According to WHO guidelines, the minimum requirements for asking about partner violence are a protocol/standard operating procedure, training on how to ask, a minimum response or beyond, private setting, ensured confidentiality and an in-place referral system (61).

#### *Methodological considerations*

The authors acknowledge the limitations of this study. First, the study had a small sample, and most of the participants were women. The participation rate was comparatively low, which can result in selection bias if the sample does not accurately represent the population. To avoid this bias, the selection process was truly random, and every patient had an opportunity to participate. Second, the participants represented patients from a single-district central hospital in Finland, which restricts the generalisability of the findings, and the results are dependent on the participants' questionnaires only.

Furthermore, violent experiences are different, and this study might not accurately portray the prevalence of FV among hospital patients. We may have failed to measure some factors that are important for identifying FV, and we may have missed some characteristics in our data extraction. In this study, the questionnaire included only physical and emotional violence, these were combined, and their contents were not defined. Violence is still a very sensitive issue, and patients can deny violence, which may have influenced the results.

The FAFHES questionnaire has been used and developed with different patient groups. The reliability and internal consistency of the instrument has proved to have a high Cronbach's alpha (>0.60) in previous studies



(25, 34, 35). In addition, the questionnaire was pretested with 27 participants after the modification in different units. The questionnaire was not changed after the pretest. (34). Reliability was assessed in this study, and the alpha values were 0.957 for family functioning, 0.830 for health and 0.951 for social support, which were considered as indicating an acceptable level of reliability (62).

## Conclusion

The role of the family is central to the health and well-being of individuals. The findings indicate that both men and women experience FV, but only few seek help from healthcare professionals. Both men and women are involved in FV as victims and perpetrators. Participants in a stable situation – that is, in a relationship and living together – experience less violence. For participants with FV experience, and especially for the perpetrators, their family functioning and health were worse than for participants without violence experience.

Altogether, this study showed that FV has effects on the health and well-being of the families and that is an area to which nursing professional should pay attention. Various patients in different healthcare settings can have an FV background, and nursing professionals are on the front line to identify and intervene in FV. Professionals can alleviate feelings of shame, fear and isolation by creating a supportive and nonjudgemental environment that is free of prejudice and preconceptions. Our findings should encourage healthcare professionals to focus more

broadly on the overall physical and mental well-being of the FV patients and their families. Additional studies are needed to test the effect of families' functioning, health and social support over the long term.

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## Author contributions

All the authors contributed to study concept and design. SK and MH contributed to data analysis and SK drafting of the manuscript. EP, TL and MH provided a critical revision of the manuscript.

## Ethical approval

This study was approved by the hospital districts ethical committee (ETL R12057H). The study was conducted taking into account the sensitive topic and participants' safety, anonymity and confidentiality.

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# **PUBLICATION IV**

**Continuation of domestic violence and changes in  
the assessment of family functioning, health, and  
social support in Finland**

Kivelä S, Leppäkoski T, Helminen M & Paavilainen E

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